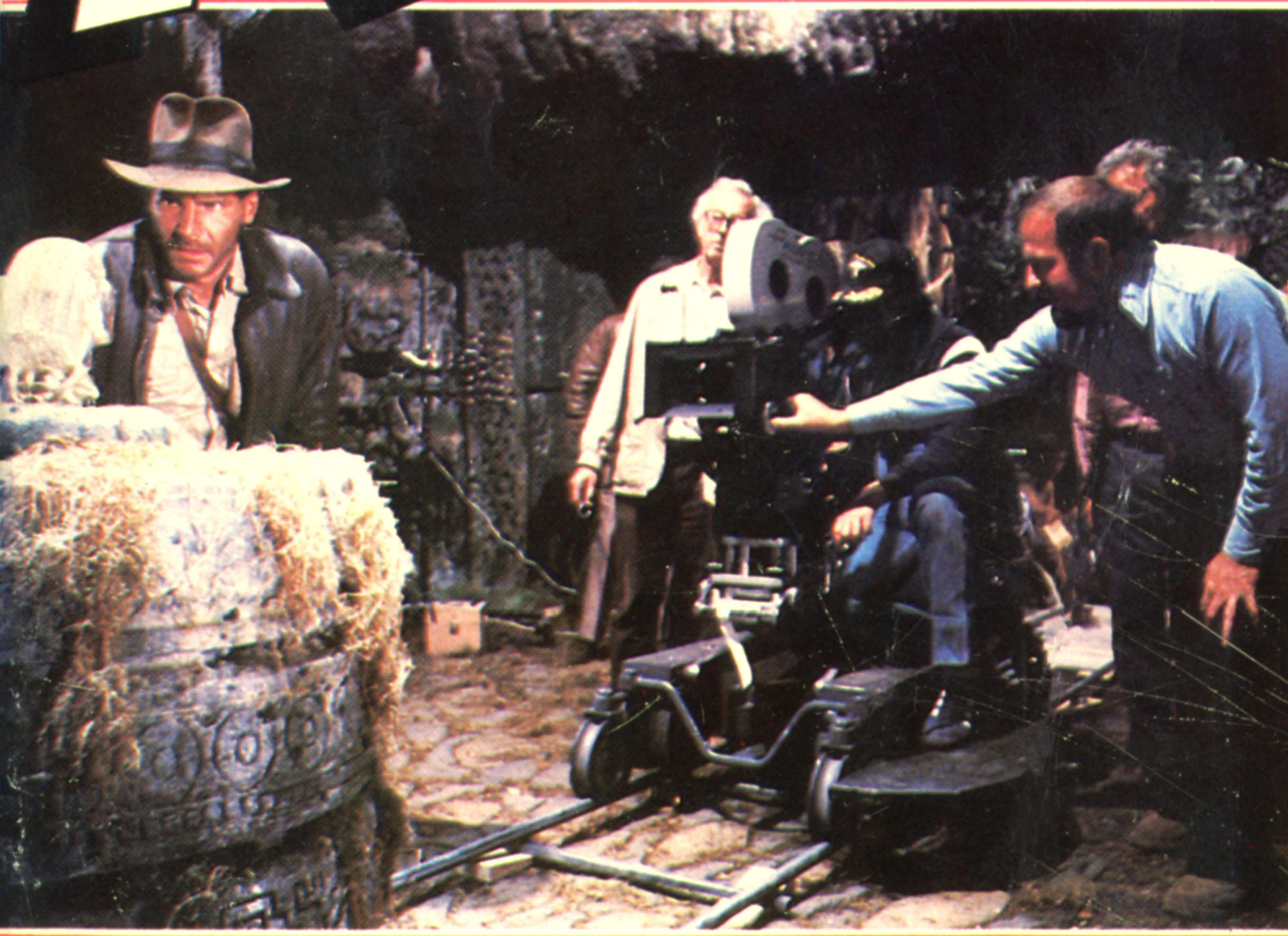
THE MAKING OF

RAIDERS

of the LOST ARK™



DEREK TAYLOR

BEHIND THE SCENES AT THE YEAR'S MOST SENSATIONAL MOTION PICTURE

Ballantine/Nonfiction/29725/$2.75

THE MAKING OF RAIDERS of the LOST ARK™

RAIDERS of the LOST ARK™

Starring

HARRISON FORD

KAREN ALLEN

PAUL FREEMAN

RONALD LACEY

JOHN RHYS-DAVIES

DENHOLM ELLIOTT

Directed by
STEVEN SPIELBERG

Produced by
FRANK MARSHALL

Screenplay by
LAWRENCE KASDAN

Story by
GEORGE LUCAS and
PHILIP KAUFMAN

Executive Producers
GEORGE LUCAS and
HOWARD KAZANJIAN

Music by
JOHN WILLIAMS

Director of Photography
DOUGLAS SLOCOMBE

Film Editor
MICHAEL KAHN

Visual Effects Supervisor
RICHARD EDLUND

Production Design
NORMAN REYNOLDS

Original Soundtrack on CBS Records

Filmed in Panavision®

A LUCASFILM, LTD. Production
A PARAMOUNT PICTURE

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DOLBY SYSTEM™

THE MAKING OF RAIDERS of the LOST ARK™

DEREK TAYLOR

Edited by ANN HOLLER

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"We're making movie history."

—George Lucas

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Prologue

Karen Allen, the leading lady in *Raiders of the Lost Ark*, Marion Ravenwood to Harrison Ford's Indiana Jones, asked me early in the production why I had chosen to write a book on the making of this particular film. In fact, I hadn't chosen this particular film. Neither I nor anyone else knew it would become this film. Films change, like everything and everyone, as time passes, so whatever it was that I had agreed to cover when I accepted the project had long since become much more.

For all of us, it became a great experience, something we could all remember from our childhood—a full-color adventure tale, the manifestation of the battle between good and evil, a handsome hero and beautiful heroine, an ugly and horrible villain and a handsome and not-so-horrible villain, the pursuit of a desired object that in good hands will be a beautiful and respected thing, but that in the wrong hands will destroy the world.

What could be better than that—especially for me, trapped in the unhurried dreams of childhood. On Saturday afternoons I had watched the ugly and the beautiful battle it out in black-and-white. That was where I learned to shoot a bow and arrow, swing a sword, climb a rope of plaited vines, all the while fighting off reptiles, shooting rapids, escaping poisonous snakes and spiders, fleeing from natives with blowguns and darts, defying Nazi torturers, linking up with treasure hunters, choosing between good and bad Arabs, and surviving suffocating and nightmarish encounters with terrors from beyond the grave.

This was the stuff of those movies. And this one.

George Rice and John Salter were working for the great sound mixer Roy Charman as boom operator and sound maintenance engineer, respectively. One night in the Grand Hotel de L'Oasis, I asked George if he thought he was a romantic. He said that, considering his reasons for staying in the industry, yes, he was. For all that it was hard and often inconvenient, yes.

John agreed. "I have to admit it," he said. "My wife asked me last year when was I going to get a proper job, grow up, and get a career." It became clear that the majority of people making *Raiders*—give or take a layer or two of worldly ennui—had a core of romanticism several inches in diameter.

I didn't cover everything and everyone, but I did get around Elstree a great deal during the studio production from June 30 through the end of August 1980, and then I traveled to the Sahara and experienced life on location with the very best of filmmakers, young and old. The entire experience was a rare privilege. I was terrifically impressed with the manner, style, form, and substance of the people on both sides of the *Raiders* cameras. The making of the film had an atmosphere similar to that surrounding the production of a great newspaper. Despite all of the disparate elements and the vast risks and the impossibility of knowing which events will throw you off course, there is no doubt that the thing will have to be done, no doubt that it will be done, and every indication that it should be done because it is worth doing.

My thanks here to Joan Taylor, my wife. She encouraged me and read most of my material before I mailed it to London from the mom-and-pop post office across the meadow from this old mill where I have spent so much of this winter. Thanks to Cherrie Cowell for transcribing so many tapes and to George and Olivia for sparing her. To Sherrie Metcalfe for her typing. And to Terry Gilliam and Michael Palin and Denis O'Brien and Alf Jarratt. Special thanks to David Wisniewitz and Phil Schuman, who were making a documentary film about the making of *Raiders*, for their kindness in allowing me the use of some taped interviews. I dedicate the book to Fred Roos and conclude these acknowledgments with thanks to Deborah Call at

Lucasfilm and Ann Holler, who became my editor and passed these words through her capable hands and brain on to Ballantine.

—Derek Taylor
East Anglia
March 1981

Early Days of *Raiders* at Elstree Studios: Production Begins

"It's like smoke. Try getting hold of it."

—Roy Button, Second Assistant Director

On Monday morning June 30, I arrived at Elstree Studios on Shenley Road, Borehamwood, England, in high summer, in the rain and in thermal underwear.

It is probably bad form to state that the pun "Bore'em stiff" is a well-known in-joke for the location of EMI's Elstree studios, but it is not a million miles from the truth. It is fair to say, however, that lots of very nice people live in Borehamwood and many of them worked on *Raiders of the Lost Ark*.

Were it not for the *Star Wars* saga, there is little doubt that Elstree Studios would have suffered in the present deepening recession in Great Britain. Until George Lucas decided, way back when, that Elstree, improved, adapted, and enlarged, could provide the best facilities for the *Star Wars* series, there was not a lot of hope for the premises.

Elstree has an interesting history in that many famous films were made there. But Elstree did not emphasize any special genre of film and does not shine in the encyclopedias—as does its greatly mourned West London cousin Ealing Studios, famous for such archetypal "English" comedies as *Kind Hearts and Coronets*. There is no special cachet to movies with "Elstree" in their credits. Curiously, Elstree survived where some more stylish studios didn't.

In the studio foyer, I noticed that first day, are easy chairs and a reception desk housing a friendly Englishwoman in early middle age. She sits beneath a small color photograph of Queen Elizabeth II (which looks as if it had been cut from a magazine and framed at home) and a black-and-white one of director Fred Zinnemann and Vanessa Redgrave.

The first day of shooting as I strode over to the edge of the set, a young English chap asked, "Who is that?" I looked around to see if he meant someone behind me, but there was nothing but a Nu Swift Fire Extinguisher. In my panic, I began to read the instructions. Give me something, anything, to read. "Excuse me, are you a member of this club?" I was lost. No, I am *not* a member.

"Who is that?" the young man asked again. As it was not, "Who are you?" it was not for me to answer.

A young American woman with a pleasant, open face drew him aside and whispered something to him. He came back across. "Roy Button," he said. "Just checking."

"Derek Taylor, just being checked."

"I'm second assistant director," he said. "What do you think of it all?"

"Terrifically organized," I said. "Very together." A modern enough reply.

"Don't you believe it," said Roy. "It's like smoke. Try getting hold of it."

With that invigorating greeting, I wandered onto the set of Imam's house, the first set to be filmed at Elstree.

I was very glad to see Harrison Ford on the set, for he was the only person I could see whom I recognized. Then it was only Harrison as Han Solo, not the man behind the mask.

He was immediately friendly, and suddenly we realized we had met before. "Monterey Pop Festival!" exclaimed Harrison. We had both worked in the same setup in that great first and only Monterey event in 1967; he was an actor, resting between jobs and making himself generally useful around the open-air festival site, and I was publicity director, wearing more scarves than Isadora Duncan.

So many of those associated with Monterey had died that Harrison and I were glad to meet again without so much as a finger missing.

He is a man of strong personality and extremely reserved

demeanor with restless eyes, half humorous and half "what the hell's going on here?" I was grateful I had met him in an earlier life, as his deep growly voice and sardonic sense of humor could be intimidating to an interviewer.

Harrison said maybe he could learn how to be interviewed. "I wish I could be like George," he said. "He has done interviews where his thoughts are very organized." I said that George seemed to be a very organized, disciplined man.

"I don't know *what* George is," said Harrison. "I mean, I know him pretty well, what his talents are, but I don't know how he manages to do what he does."

As we talked he was rolling his right wrist around and around, holding a very heavy, small sphere made of metal and weighted and powered with a curious centrifugal thrust.

"I busted my wrist when I was a carpenter," he said. "I fell off a ladder at Valerie Harper's house." His wrist was still not strong and he might not have noticed had not the authors of *Raiders* specified a ten-foot bullwhip as his chief weapon. Had it been, for instance, an ice pick, then there would have been no problem. But there would have been a less charismatic Indy, I think.

"My wrist has never quite come back," he said. "When I started bullwhipping I realized how important a wrist is." The sphere would, fraction by fraction, bind his wrist tissues that bit more. Training is a long, long job.

I asked the hero if he found his given weapon a problem in other respects, inasmuch as he would be expected to handle it as well as Basil Rathbone a sword or Humphrey Bogart a cigarette.

"I had very little instruction," he said. "There's not a lot you can do. Glenn Randall, the stunt coordinator, showed me how not to whip the hell out of myself. But half an hour after he started training me he finished because it's really something you have to do for yourself."

Harrison said he was not actually very fit, in the sense that, say, athletes are fit. "In fact I haven't been fit for about thirteen years," he said. "When we last met, I was fit. Now I don't do a thing. I don't work out. I don't jog. But I have to say I do have a good constitution."

Then it was time for the "rushes," or the "dailies," as they are known more often these days. As the crew had

been on location in La Rochelle, France, the previous week for the submarine and *Bantu Wind* and Cairo docks scenes, there was a lot to see on this first Monday at Elstree.

The scenes were wonderfully photographed. Sitting in one of the wide, deep, fitted armchairs at the rear of the screening room, director Steven Spielberg remarked cheerfully, "Great, really great," as the sea rolled across the screen, gray and wild and beautifully lit. Now and again some of 1980 came into the shot; those pieces of film would have to be discarded but there was ample coverage. Editing took care of those problems. An editor came to Elstree daily from the cutting room in central London.

Back on the Imam's house set, I began to see who was who. Or rather who looked like his photograph in that excellent book *The Movie Brats* and who didn't. George Lucas and Steven Spielberg were both clean-shaven in the book. Both had beards today. There they were: neat compact young men, both about five-feet-eight.

I walked across to George and introduced myself. As we talked, Steven walked over and said to George: "Doing an interview?"

"No," said George, "just talking." He introduced me to Steven as a man who would be writing a book on the making of the film.

"Oh, like the documentary team is doing a film of the filming of *Raiders*," said Steven. Steven, George, and I chatted pleasantly and then we were joined by John Rhys-Davies (pronounced Reece Davis).

John Rhys-Davies, from South Wales, trained at the Royal Academy of Dramatic Art (RADA) and various notable British theater companies. He also worked on radio—there is still much radio drama in Great Britain—and in television and films. John said that when he left RADA he had expected that he would spend half his time acting and the other half writing. He assumed, not unreasonably, that he would be unemployed a great deal.

It had not worked out that way. Not only was he tall and imposing, with a rich, dark Shakespearean voice, but he could also act. He would not find a lot of competition if a casting director were looking for a large, dark-eyed Welsh/Mediterranean or, in a pinch (of the eyes in make-up), Japanese type. He could also play people twenty years older than his thirty-six years.

From Rhys-Davies' lungs the simple statement, "I have just had a cup of tea," can sound like the conquest of China. How, therefore, was it that he was hired to play Sallah, described in my copy of the script as "a *small* cheerful energetic fellow in his forties?" Something obviously changed Steven Spielberg's mind about the part.

The first day at Elstree was spent filming Imam's house. Imam, an astronomer-priest-scholar, lives in a house on a rise at the edge of Cairo. The house is exotic and romantic, enchantingly furnished in traditional "Casablanca" mood, with an enormous revolving fan only inches above both Harrison Ford's and Rhys-Davies' heads. "Is this going to be okay?" Harrison asked Steven Spielberg.

"Sure it is," said Steven. "Don't worry about that. It's just the right height."

Harrison looked at the fan again, shrugged, smiled ever so faintly, and prepared to shoot a scene in which he and Sallah wonder how Belloq could have gotten a copy of the headpiece to the Staff of Ra.

"Action," shouted Spielberg.

Karen Allen came on the set the first day as an observer, warmly greeted by director, producer, actors, and crew. Much smaller and gentler than the Karen Allen we had seen on the screen in dailies. Marion Ravenwood, the tough woman in a long white dress with wild dark flowing hair and angry eyes, was almost unrecognizable when she presented an open freckled face to the folk at Elstree. She offered a broad smile to Harrison in return for his rather gallant, fetching old-fashioned mimed kiss.

Back near the production office, executive producer Howard Kazanjian was talking about La Rochelle. "It was *very* rough there. I knew if I stayed on the ship two minutes more, there would be trouble. George stayed, I left. There was a life raft on top there. And George lay back on the raft with his eyes closed. He was feeling terribly seasick."

At wrap time, I reflected that my first day with *Raiders of the Lost Ark* had passed and I had not died of unfamiliarity. Faces were taking shape, the layout of the stages was less forbidding. Next day I would begin to learn the politics of the production corridor on the second floor.

* * *

Tuesday came very quickly, it seemed, as I ran for the 7:05 A.M. train.

Safely arrived at Elstree, I examined the *Raiders*' accommodations. Lost Ark Productions was clearly the studio's ranking tenant. Even though the offices were very small and basically bare and dull in design, their appearance belied the activity taking place within. First of all, the production office where an extraordinary load of work rested on two young women: Pat Carr, assistant production manager, and Gill Case, production assistant. Between them, they took care of reams of precise paperwork and many thousands of telephone calls, many of them bilingual (English and French).

Flanking Pat's central production office were Doug Twiddy's production supervisor office and associate producer Robert Watts's office.

Across from Pat Carr's office was the photocopy and tea/coffee room run by Dan Parker, a smart young man with an inpeccable willingness to please without obsequy, due perhaps to a mixture of long-term ambition, a good education, and a father who was in the film industry.

Dan's room was a jolly spot with a small refrigerator with a decent selection of cold and healthy drinks, and on the shelves a variety of teas and cookies. There was an endless supply of good, always hot coffee (for the American influence was strong in the corridor) and on the wall several jokes and ironic memos from past movies.

A few feet down the corridor was the final office, the corner suite with three very simple rooms, built around a central secretarial area, occupied and controlled with great practical calm by Barbara Harley, secretary to producer Frank Marshall. Barbara was my ally for all of my stay at Elstree, making me extremely welcome when I set up very orderly camp near her desk.

In fact I had been offered a desk in the press room, but it was so far from the action that I never went there. The corner of Barbara's room was a terrific vantage point for the comings and goings of the "movie brats" and their many busy guests-on-business. Frank Marshall was always ready for a friendly or informative exchange, sometimes long, sometimes short, and many a day the room was thick with talent and gossip.

George Lucas did not choose to have official premises.

Steven did have an office but rarely used it. Howard Kazanjian, who had set up office at a table in Steven's office, became the official proprietor of that room. George and Steven used a general-purpose table in what became known as Howard Kazanjian's office—George because he was at Elstree for a total of only two weeks, Steven because he was directing in the studio all day every day. Howard's place tended to be a leisure room, especially since it had a very addictive electronic Asteroids game glittering and whizzing in a far corner. I never saw Howard use it, but it was a powerful magnet for Barbara and her other neighbor, Kathy Kennedy, a vivid, cheerful young American who was Steven Spielberg's assistant. Frank Marshall and Steven joined them when they had a moment free.

Asteroids appeared to have all of the pull of a roulette wheel without the financial reward; two of my children who visited the studio reported losing heavily to Karen Allen.

What Brought Us Together: The Lure of *Raiders*

"You sit back and say, 'Why don't they make this kind of movie anymore?' And I'm in a position to do it."

—George Lucas, Executive Producer

I decided early that I wanted to find out how all the principal actors and production crew came to work on *Raiders*. It was a remarkable group of people that included the two top American directors. I decided to start with one of them.

In the late summer at Elstree, I asked Steven Spielberg how he came to be involved in *Raiders of the Lost Ark*.

"It was May 1977," he said, "and George was on vacation in Hawaii because *Star Wars* was opening in Los Angeles and he didn't want to be around for it. We were on the beach at the Mauna Kea hotel in Hawaii. We built a sand castle, a sand castle that stood against thirty minutes of tide. While we built it, George told the story of a film called *Raiders of the Lost Ark*. He said it was part of a series of Raiders sagas following the exploits of adventurer/archeologist Indiana Jones, not unlike the Tarzan series or, by the same token, not unlike the serials of the '40s and '50s.

"The difference would be that our leading character would be involved in mortal adventures and also in 'otherworldly' events, in a period thirty or forty years before our

time. A period where adventures could happen, a romantic time when it took a little longer to get around the world by air than it does today, a period without advanced technology, where the cleverness of the individual against the enemy was what mattered. So it wouldn't use laser guns and light sabers and James Bond weaponry.

"After he told me the story I said: 'That's a terrific story, George. It's something I'd like to do.' United Artists studio had come to me after I made *Sugarland Express* and said, 'You have a choice of films, what would you like to do?' I said, 'I'd like to do a James Bond film,' and they said, 'Aside from *that*, what would you like to do?' So I never asked again. I probably would not have been good at making James Bond. I wouldn't have wanted to make a film that relied as heavily on modern technology and stainless-steel gimmickry as the last four or five Bonds. I much preferred *From Russia with Love* and *Goldfinger*.

"George knew I was interested in that sort of film. He knew that when he told me the story of *Raiders* when we were building the sand castle."

In September, when we were in Tunisia, and the film was within two weeks of completion, we returned to the subject of the origins of the *Raiders* story.

Steven said, "When George and I sat down to talk about *Raiders*, George said, 'Look, this is a B-movie. They used to make four of them a week, at each studio, for fifteen years from the '30s into the '40s.' "

Steven added, "The whole style of the movie is old-fashioned. There is a mood not unlike a lot of old movies that were very atmospheric. It says, 'What's on your mind?' instead of pussyfooting around and leading up to what it has to say. There was more directness in film thirty years ago. People came right out and said: 'I hate you' or 'I love you.' "

I talked to George Lucas in the desert near Tozeur toward the end of his week in Africa. He pinned down the origin of *Raiders* as closely as he could.

"It started for me about ten years ago-when I had an idea to do an action-adventure kind of serial. This was about the same time I came up with the idea for *Star Wars*, so *Raiders* got shelved. I figured I'd get to it someday. And after *Star Wars* came out, I was with Steve and told him the story and he got very interested in it. After Steve

agreed to do the movie, I hired Larry Kasdan to write the screenplay, and then went to Paramount and made a deal for them to distribute it.

"The essence of *Raiders* is that it's a throwback to an older kind of film. It's a high-adventure film vaguely in the mode of the old Saturday afternoon serials. Actually the serials were C-movies and I would say that *Raiders* is an old-fashioned B-movie. I have two other stories that involve this character, and so if this one is successful then there will probably be another.

"The reason Steve got involved in this one is that when I mentioned it to him he got very excited about it. The picture would still be on the shelf if Steven hadn't expressed an interest. I was eager to have Steven direct the picture because he's an extremely good director, especially good with action and suspense, and that's primarily what this film is.

"What inspired me to make *Raiders* was a desire to see this kind of movie. You sit back and say, 'Why don't they make this kind of movie anymore?' And I'm in a position to do it. So I'm really doing it more than anything else so that *I* can enjoy it—I just want to see this movie.

"As for the mysticism in it, I think mysticism is interesting and I think it's good subject matter. One of my original ideas was to make a film about an archeologist, and I decided to combine the action-adventure with archeology and that led toward a treasure-hunt plot and also the mysticism."

Producer Frank Marshall recalled his first word about the movie: "I got a call from George to come in and meet him. George said that one of the projects coming up for his new company was with Steven Spielberg and that Steven had mentioned he would like to have me working on the project. I said that was terrific. Later that day Steven came in and we met the writer, Larry Kasdan. George was introducing people to Larry and he introduced me as the producer of the movie and that was it. An hour later. That's the way George is. It's amazing.

"We all shook hands and George said, 'We're making movie history.' That was three years ago. Then began a series of meetings in which George outlined the story.

"We knew that sometime within the next three or four

years we would all become available at the same time to do *Raiders*. That happened about a year and a half ago.

"Steven found he could do *Raiders* after *1941*. I was working on another project that was postponed. So I started working on *Raiders* over a year ago."

Howard Kazanjian, executive producer of *Raiders* with George Lucas, remembers Harrison's casting in the film. "The thought, as with most of George's pictures, was to go with relatively unknown or totally unknown actors, and find a leading man who could be set for three pictures. So with casting, we were thinking not only of *Raiders of the Lost Ark*, but if—or when—the picture is successful the two additional pictures to follow.

"George described his character and the artist came up with three or four very good-looking pictures. He was a rugged individual with a bullwhip, a gun, and a leather jacket and hat. We knew that was our character. But we had difficulty finding an actor. You can find a guy who looks good and is tough-looking, but he can't act.

"Eventually he realized Harrison *was* Indiana Jones and, fortunately, he agreed to do the part."

Associate producer Robert Watts, a pleasing, no-nonsense Englishman in his early forties, remembers *Raiders'* preproduction. "I had done *Star Wars* as production manager and was still on the *Empire* payroll as associate producer when I did the first scouting trip to Tunisia for *Raiders*. Norman Reynolds, the production designer, and I went off in December 1979 to establish whether we could make use of Tunisia."

Robert Watts came into *Raiders* less romantically than Steven, but with no less commitment and, as it turned out, a lot of "firsts." He said, "It has been unlike anything I have ever done before. The most interesting experience. I've never done a movie that's come in so much under schedule and been so busy. I've never shot in four countries with a first unit. Logistically a very, very complex film."

Director of photography Douglas Slocombe said he had hoped on *Raiders* to have "lots and lots of time. I thought, well, this is wonderful, Steven Spielberg, here is my chance to get some time. Now at long last I could have a chance to do a picture as with David Lean, who goes for almost forever and always gets the most magnificent results. But,

of course, not so. As you know, not only has Steven come up *on* schedule, but he's come up *under* schedule."

Harrison Ford recalled, "George called me and told me what I had heard for a long time before—that they were making this film. I assumed they had someone for the part. I was surprised when George called me and asked me to talk to Steven. And then I read the script, talked to Steven, and I was enthusiastic about both of them: the script and the director. A good start, right?"

Harrison said he met Steven at the latter's house. "We played pinball and video games and Steven and I talked. Steven was bubbly and enthusiastic and seemed like he might be fun to work with. So I agreed and took the part. And he has been a lot of fun to work with. I've enjoyed this film as much as anything I've ever done and it's been hard work as well, which I like."

Carrying quite some weight as the only woman in the film, Karen Allen, a New York stage actress more than a television or movie face, said her first knowledge of *Raiders* was when Steven Spielberg and Frank Marshall had come to New York to meet actors. "They asked me to come and read for it," she said. "So I did and then later they asked me to come and do some screen tests for it. They gave me a scene from *Raiders*—the scene where Marion Ravenwood (my part) and Indiana Jones first meet. So we did screen tests and I did several different ones with different actors. It was from there they decided to cast me in the role."

Howard Kazanjian, Executive Producer

"We've captured the spell of Abu Simel."

—Howard Kazanjian

Shortly after I was hired to write this book, I met Howard Kazanjian, executive producer, whom I have thought to describe as serious. Indeed he was, and so was his job as executive producer, but that was not the whole story. Beneath it all and sometimes above it all, he had a light, elusive but very quick humor, and if he was asked for an answer, he gave it. Frank about himself, he was the same about all subjects—an American trait very welcome in England, the home of compulsive secrecy and whispered asides.

Howard told me everything about *Raiders of the Lost Ark*, except what he didn't know, at our first meeting on June 17 in Elstree, when it was horribly wet with wretched summer rain.

That day, Howard talked up a storm about Lucasfilm and Steven Spielberg's involvement with the *Raiders* project: "Steven did a very interesting thing in casting. Nobody was given the script. He would first meet them, talk with them, in a very large kitchen. To put them at ease, Steven decided to have the actors help make cookies or cake or whatever. Sometimes he would have them add the ingredients. And there were other people standing around, sometimes myself, Frank Marshall, Steven's assistant,

Kathy Kennedy, and somebody would pick up a camera and take a few shots of the actor.

"I would think it must be a little difficult and a little trying for somebody coming in to meet Steven Spielberg. He is very famous, after all—they were meeting almost a legend. So this was a good way to relax people.

"Of course, sometimes the interviews were done in an office. Steven would occasionally write up a small scene and have two people play against each other; and then, as we got down to our final choices, we filmed the actors."

"Why did you choose to film *Raiders* in England?" I asked.

"We did a budget for the United Kingdom and another for the U.S. The U.K. was cheaper. Maybe if we did a budget comparison today the costs would be equal. Not only because of the devaluation of the dollar and the increase in value of the pound, but also because of the expenses of long-distance communication between California and London, additional phone calls, plane trips. I would say it might have been cheaper to shoot the picture in the United States.

"But despite that, I'm happy we're here. And the third in the *Star Wars* saga will come back here. We love the crew; there are some really fine technicians and artists here.

"Also we wanted to maintain secrecy and that was certainly more easily done here than it is in our own country.

"Suddenly it'll happen that everyone in the States knows what you are doing, what the story is about, and then you see your story on television before you get your movie out. So the need for secrecy was one of the main reasons we came here. And also, of course, we're close to Tunisia here and the script calls for that part of the world."

Howard went on to describe the sets and the story a little and then took me around to see the sets and to introduce me to some of the people with whom I was to become very familiar and even very friendly in the next few weeks.

On the way around the stages I was astounded by the extent to which Lucasfilm (or rather Lost Ark Productions) had taken over EMI Elstree Studios. What on earth would be happening here if it were not for American cap-

ital? If it were left to the British film industry, I am afraid there would be a lot of cobwebs and wind around Elstree but not many machines to make them; a lot of hot air but not much scripted dialogue. That, after all, was the case before George Lucas brought his *Star Wars* there.

Howard took me first to stage four, the South American temple. This is a splendid set, with a very '40s feeling about it, in the sense that recalls '40s serials. Though it is obviously an interior (I mean, we *aren't* in South America; I *have* just recently got off a train from London to Elstree in the rain), it is a good one, with a "Tarzan" atmosphere, hidden dangers galore, and a valuable idol to find. There's also some good honest foliage, very much alive, which looks tropical, but isn't. Actually it is an English vine called "Old Man's Beard," brought here by the trayful, some of it used on the bog planet for *Empire* and then, according to associate producer Robert Watts, taken to Hawaii and used for the temple exterior in the final week on *Raiders*. Then it was left in Hawaii where, maybe, it will flourish and become part of a new colony.

Howard and I moved from South America to Egypt, on stage three, the Well of the Souls set. Howard was very much interested in Egyptology and was the company's authority on the subject. In 1979 he and his wife Carol had followed the entire Nile ruins from Cairo to Abu Simel. Much of the authenticity in the Egyptian part of the film is due to his keen awareness of the Egyptian mystique.

This stage three is something else. New and so big it can absorb the massive Well of the Souls and the dreadful corpse-strewn catacombs and still not be full. In fact, you could remake *Gone With the Wind* at Elstree if anyone were so daft as to try it. Elstree, it seemed to me, was altogether very big and I could see why George Lucas had picked it up for the first *Star Wars*—and by so doing changed a lot of people's lives and livelihoods for the better.

On stage five Howard pointed out the lovely construction of the Map Room, miniature of an entire city. This is the place where the light shines through the medallion onto a certain building to reveal where the Ark is hidden. Howard pointed out that this is reminiscent of the magical spell cast twice a year at the Ramses II temple at Abu Simel. He said we've captured the spell of Abu Simel.

Next the Raven Bar in the Himalayas, where Indy and Marion meet. We see a wonderfully sandblasted and "old" fireplace, where a real fire will burn and from which a poker will be taken by the Nazi Toht to threaten Marion with torture. Soon afterward, sad to say, the "Raven" will burn down.

This bar is a wonder of the designer's imagination. Anyone know what a bar in Nepal would look like? Right, then! Make it up! And here is a rugged masterpiece of '30s imagery, the cigarettes of the period on the shelves, the drinks, the furniture all in period; but the overall aura of the place is "mountains" and it feels right, and right rough, at that.

So we said farewell to the sound stages and I shall never quite forget that very first sighting of what was to become a way of life for that long wet summer. It was the height of British craftsmanship.

On the way around we met Douglas Slocombe and Chic Waterson, cinematographer and camera operator, gray-haired men who looked as if they had been staring at things for years. Chic nodded and Dougie smiled and said, "Writing a book, eh? Trying to see how many lies you can cram into the smallest space?" Well, I hope not, I thought.

I hadn't read the script and I hadn't met the actors but if those four piercing eyes on Dougie and Chic were going to film these sets under the direction of Steven Spielberg then it would *look* sensational.

I picked up my script, coded in case I leaked it, thanked Howard, and went off home, terrified in case it all proved too much.

Frank Marshall, Producer, and Norman Reynolds, Production Designer

"I don't think it has to be a nightmare."

—Frank Marshall, Producer

Frank Marshall began his film career working for Peter Bogdanovich on Bogdanovich's first film. He did everything, including acting and emptying wastebaskets. He was an invaluable support to Bogdanovich through several movies and has produced for Martin Scorsese, Orson Welles, and Walter Hill.

I asked Frank about his perception of the role of producer.

"The producer of the old school," he said, "was the guy who actually financed the film. Nowadays, producers can be anybody from the director's girl friend to somebody who actually gets the movie made, the person who had the idea. Or it can still be the guy who puts up the money.

"First of all, I think of myself as the person whose job it is to get the movie made; the actual physical making of the movie, organizing the entire shooting period and then delivering the finished product for the release date.

"Then I'm also in charge of and responsible for making the movie for a certain amount of money and trying to keep that under control. It's partly business and partly creative."

Discussing the balance between keeping the director happy and keeping under budget, Frank said that the best

possible situation is to do both. "But when you make up a budget seven or eight months before actually shooting the movie so many things can change that you have to be flexible and adjust—adjustment is the real challenge."

I said that the notion of keeping the director happy was comparatively new. In the old days it was of very little importance whether or not the director was happy, unhappy, or had a broken heart. Why had this changed, I asked.

Frank said that his background was really so much involved in working with directors that he could be prejudiced. But he liked to think that one could make a movie and have it be a pleasant experience as well. "I don't think it has to be a nightmare." Yet there are more and more people within the movie industry and near to it who talk of "self-indulgence and irresponsibility" on the grand scale now that directors and performers are free from studio overseeing.

Frank said, "I think the way movies are made these days there is a heavy responsibility on a director—many people don't realize how heavy it is. So the producer must balance the money and the time strictures, and also take care of the director. You have to deliver the tools he needs to make the movie that he wants to make. And you need rapport between the director and producer so you can get things done together rather than fighting each other.

"All this can be done while you have a good time. It pays off in the end. After all, if you don't work well together, the movie will probably end up costing a lot more money and then nobody's going to be happy."

Frank pointed out that there was a unique situation in *Raiders* in that the film involved two top directors. Both are close, noncombative friends, one of them (for this film) director, the other executive producer.

Each man, I was thinking, had a lot going for him in terms of reputation. Despite the reviews of *1941*, Spielberg had, in modern terms, too much of a track record to make him too vulnerable. Had he made only *Jaws* then, perhaps, Hollywood would have been less friendly. But Spielberg had written *and* directed *Close Encounters*. And then there were *Duel* and *Sugarland Express* as well.

As for George Lucas, he had three remarkable successes: *American Graffiti*, *Star Wars*, and *The Empire Strikes Back*. With such men no one is gambling.

Of George and Steven, Frank said, "What is unique on this film is their close relationship. They have known each other about ten years and have worked closely on this script for a long time.

"George is very good about saying, 'Okay, go make the movie. If you want to discuss anything, I'm here. But *you* go make it and when you come back, we'll see what you've got.' He's very good about staying out of the way.

"So Steven makes Steven's movie. The way I fit into this is that Steven has asked me to produce the movie for him. I am also responsible to George to deliver the movie for the amount of money agreed upon."

We talked about the need to stay on schedule. "We really are organized," said Frank. "The real key here is to anticipate things. You have to have storyboards and preplanning.

"If you don't start the movie prepared, you never catch up. You are constantly stumbling to try to make things work along the way and then you miss the things that are going to happen next week. But we did a good job preparing to shoot so when things go wrong, we are able to deal with them.

"When we ordered snake serum two months ahead of time and it didn't arrive on the day we needed it, we continued to shoot other snakes, nonpoisonous ones."

Frank Marshall conceded that, logistically, *Raiders of the Lost Ark* presented certain challenges. "There is the fact of shooting in four different countries. It's not like at home where you go from California to Nevada to Utah and just drive state to state with no problems, no holdups.

"Here, going from England to France or England to Tunisia, you have to have customs lists, have to ship things days and days ahead of time. You have language barriers, vaccinations, passports, hotel reservations, the transportation of equipment and construction teams; all those things have to be considered.

"Right now we are spread thin because we have construction crews in three countries and it's hard for the production designer to get around to see everything."

"What do you enjoy about being a producer?" I asked.

He said, "I guess I just love to make movies. I am lucky enough to have found something I really like to do and

am able to make a living from it. Support myself and go places.

"Part of my job is to take care of everybody on the film. To make sure they are happy though we are working real hard. I have to be a psychiatrist, a father, a friend. All those things.

"If things are rough, I'm the court jester or the comedian. I am allowed to go into every department I want—that's another thing I enjoy. I don't have any restrictions. I can put my fingers into any part of the movie. It helps to keep an overview of the whole movie.

"Walter Hill called me the eternal optimist. In a bad situation I like to see the funny part of it.

"I say, 'It's only a movie!' You do get through everything eventually."

Frank said that seeing the funny side of things was a trait he always admired in his father. "He was a composer, musician, in the same business as us. Entertainment. I saw him deal with a lot of different people and as long as he had a sense of humor about the work he always got the job done."

Frank's father, Jack Wilton Marshall, scored two of John Ford's films. At a birthday party for Ford's daughter Barbara, Frank, then a U.C.L.A. political science major, met Peter Bogdanovich and got himself hired as a jack-of-all-trades on Bogdanovich's first film, *Targets*.

Frank was the most available of all the executives and the most visible (if you except Steven, who was almost always to be found by the camera). As he said, he had the freedom to move around and he took considerable advantage of this opportunity.

I was standing near the South American jungle set one afternoon at Elstree and I saw George Lucas alone. I recalled Frank's report on his first meeting with George and Steven. He remembered George as saying, "We're making movie history."

I thought I'd ask George about it. "I wonder whether you can cast your mind back to 1977, when Frank Marshall, Steven, Larry Kasdan, and you were having a meeting and you said: 'We're making movie history'?"

George looked startled: "*I* said that?"

"Yes. I think so. I hope so, anyway."

"Well," said George, "if I said it—and I don't recall saying it—then I'm not sure what I meant."

"It does sound a bit flamboyant for you," I said, and George agreed.

"It is too flamboyant for me. But I may have meant that it was some sort of occasion for Steven and me to get together, the two top directors at the time. Movie history? Yeah. I guess."

So it stands.

Norman Reynolds, as production designer of *Raiders*, must walk away from the picture with a sense of triumph, triumph over time and space, over so dense a set of logistics that it is extraordinary that he did everything that was required, and more, and was never late.

Consider that the movie was filmed out of doors in four countries: in England, Africa, France, and Hawaii; on the sea, in the desert, and in the jungle. It was filmed also on seven massive sound stages at EMI Elstree Studios, and involved, among innumerable smaller but no less complicated effects, the truly magnificent Egyptian Well of the Souls, with a ceiling over thirty feet high, supported by giant statues and swarming with thousands of snakes; a dank temple in "South America," dripping with vegetation and danger; a fierce tavern in the Himalayas; an exquisite map room representing a miniature ancient city; beautiful 1930s interiors set in the Orient and the West; hideous catacombs; a full-size aircraft designed and built to do everything but fly, and an altar for the Lost Ark in a vast desert "canyon."

And that's not all.

Let us present Norman Reynolds, from the creative womb of Wales, brought up in the maw of outer London, a very low-key man who cloaked many of his statements with tentative modesty.

Norman came into pictures about twenty years ago from the less attractive world of advertising, where he also worked in design. An errand took him, by chance, to Shepperton Studios near London where Bing Crosby, Bob Hope, and Joan Collins were making *The Road to Hong Kong*.

"I rather liked what was going on from an art-department point of view and I set about involving myself with films. I had no idea what actually had to happen, but I decided to find out. It took about two years . . . so you could say I stumbled into it in the first place."

In the years that followed he worked on a great many films, most of them American-financed, and he built a reputation for taking pains and harboring a vivid sense of imagery beneath a face which is two parts anxiety to three parts certainty.

Then, in the mid-1970s, he fell in with George Lucas and company and became the production designer for *Empire*.

In his office at Elstree Studios, a little room lined with drawings, paintings, production stills, work-in-progress and all manner of other paperwork, he talked, cigarettes to hand but not in mouth, of his work on *Raiders* and in general.

"Ideally, I like to have a script and do some drawings to start," he said. "And then talk to the director about it and make whatever adjustments may be necessary. It really depends who the director is and how concerned he is about the visuals. Some are more interested in the acting, in which case I have sort of a free hand, or *more* of a free hand. Each picture is a very individual animal, really. You have to be flexible.

"The ability to change course quickly is essential because the medium we're in demands that. There can be enormous sudden changes. An actor becomes ill and the scene we *were* going to shoot now comes after the next one, so we have to do all sorts of panics to enable the show to go on.

"If you get bedded down into a set way of doing things, the machine will roll over you, and it's only a matter of time before you're finished—through!"

"How do you get started designing the sets?"

"Having determined what the set should look like, I do a sketch and confirm with the director that that's what we both want to do. Then I put it in three dimensions by making a model. The moment the model is approved, then it's a matter of working with the draftsmen to prepare the working drawings. These then go to the various departments and the set finally arrives.

"It's all in communication. That's the secret of this game, you know—communication. Steven and George under-

stand this and they have a very good relationship. When the three of us talk, George might acknowledge that Steven has a better idea than he does, or vice versa. Then finally, out of discussion, one train of thought will emerge."

I asked Norman what sort of director Spielberg was from the designer's point of view.

"I think Steven's concerned about all aspects of the picture, really. He gets involved with every aspect of the picture from my department to all the others right down the line. I think he tries to think visually.

"But at this stage, when he's actually shooting, then he's thinking in terms of the actors; he's sorted out a lot of the problems as far as my area is concerned way beforehand.

"I came into this in October 1979 and immediately started an enormous amount of traveling all over the place. Tunisia first, looking for locations. And from November until now (July), I'd say half the time has been spent looking for locations; in between we've been designing the sets.

"This is a busy period. It's a concentrated effort over the next seven weeks. I'm pushing. Always trying to think ahead; last October, for example, thinking about the Well of the Souls and scheduling our program so that the set would be ready for whenever it's scheduled. There's no actual design involved in that; it's pure mechanics and planning. After you've thrashed out how the set should look, then it's a question of achieving both the design *and* the date.

"The people I work with closely aren't very much seen, but they are vital. The construction manager is a key man, obviously, and the master plasterer on this picture is tremendously involved. The scenic department, too—the head painter is a man I'm always having to talk to. Obviously special effects are heavily involved in *Raiders*, not so much opticals, but *physical* effects, so we all have to work together for the final results.

"As far as the director's concerned, he has to look to someone like me, someone in my position who has the overall point of view, not one department's point of view. And that's my lot.

"You actually have to be on the sets as much as you possibly can. I don't wish to sound grand at all, but you do have to be there all hours. And it's not to say that I'm the only person who can achieve the look; I'm not saying that

at all. I'm saying that to get the individual look that I *want* to achieve means seven days a week for months, really. That's the price you have to pay for involving yourself *that* deeply, almost to the exclusion of everything else. As my family will assure you."

I asked Norman about the stunts in the Well of the Souls and how he'd prepared for them.

"One of the statues has to fall. That means 'rams' (hydraulic lifts) in the bottom of the legs of the 'beast' that forms the statue. Then we have to prepare break-away walls for the statue to fall through. As far as the falling over is concerned, we work with the special effects department to determine what size 'rams' and so on. It's a joint effort."

Harrison Ford is on the statue just before it falls. His stunt double Martin Grace is on the statue *when* it falls.

Norman said, "We spoke to the stunt arranger and went through the routine that Indy will follow and provided handholds and things to make it work, and safety pads and so on so that, we hope, no one gets seriously hurt. And where Marion is involved in her stunt, hanging on the lower jaw with teeth breaking away from the beast, we hope we have resolved that satisfactorily."

"What about the snakes in the Well?" I asked. "How did you get them to look right?"

"We had to think in terms of real snakes, which meant an animal handler. He suggested we order snakes three or four months in advance so he could arrange for them to be hatched. We did do that, and when the snakes hatched they were earmarked for EMI Studios.

"Apart from the handling of actual live snakes, there was the problem of just having enough of them to give the proper effect. To have the sheer number of snakes down there —or at least the effect of having a lot of snakes—involves a lot of trickery."

"What is the designer's relationship to the cameraman?"

"I have a very good relationship with this particular cameraman (Douglas Slocombe) who is an excellent lighting gentleman. But whatever the relationship or understanding is, there comes a time when he, as an individual, is lighting it. And people have different interpretations. I try to make my point. But it's very lonely when he's on the stage with a director and everything is hovering around the lighting

of a particular shot. The pressures are enormous for the cameraman at that particular moment. In the final analysis, he'll do only what he can in the time he has. Unless it's a picture where the money doesn't matter, schedules don't matter. There are pictures like that. But *Raiders* is a very well-planned enterprise. The moment the set looks photographable, it's photographed. Those are the realities of the situation. Sometimes I'm disappointed. Sometimes I'm pleased where I didn't think I would be. But, overall, if the cameraman's a good cameraman, it works in the end. So with *Raiders*, with Dougie, it works."

Snakemania and the Well of the Souls

"I like snakes, but I treat them very carefully. Particularly the ones with venom."

—Michael Culling, Animal Handler

Snakemania came to Elstree somewhere in the second week of July and lasted for about two weeks. Then it died away and most people wondered what all the fuss was about.

The answer will be up there on the screen when those thousands of hissing reptiles from all over the world threaten Marion and Indy and the watching millions.

Frank Marshall, who became a snake expert during their memorable burst of stardom at EMI Elstree Studios, had a very good handle on the impact of the snakes. "Nobody's ever done a snake scene with so much force before—never," he said, and he had much experience with them. After the main unit had finished with the snakes in the Well of the Souls on mighty stage three, Frank was placed in charge of the second camera unit for many, many days to do snake inserts, with Paul Beeson as cameraman. They teased them, squeezed them, cajoled them, thousands of them, into camera range, into full frontals; cobras hooded, pythons snapped, boa constrictors coiled, and the thousands of "ordinary" snakes went about their daily toil of just being snakes.

They were an absolute sensation when they arrived at Elstree. For days there had been a busy rumor mill.

"They're here." "They're not here." "I hear they eat whole goats." "Don't they have their stings removed?" "They eat each other." "They can easily escape, you know."

There were rumors everywhere. From the production office to the reception desk, along the corridors, out to the sound stages, stories of snakes wound their way into everyone's consciousness, even unto the great director himself who, like most of us, including the screenplay's author Larry Kasdan, had not known that the snakes were *not* afraid of fire as the script *demanded*, but actually liked it and got as close to it as they could.

Uh-oh.

Steven remarked, "George, Larry, and I didn't know that snakes love fire. Cold-blooded, they warm to it. Cobras and pythons will strike at flames. So we'll have to find something else that they hate—a smell, a pesticide. I'll have to have the insert team come and get little groups of them to move away. This is the most aggravating part of the film so far. They could slow us down a couple of days. We just didn't know."

Because there is magic in filmmaking, the problem was solved. But it had been a shock. And not the first.

The first shock was the actual sight and sense of the reptiles when they were emptied out of their containers into the base of the Well of the Souls. It was an extraordinary experience. People *are* fascinated by reptiles: they have so much power and they are very, very old.

The snake handler who brought them to Elstree, Mike Culling, who knows a great deal about all living creatures, says that snakes are "the perfect creature." He said they can swim, climb, survive and cross any terrain, live in any part of the world. "A constrictor could kill a man, easy. If that python there—that big Indian (indicating a massive thing as fat as a football player's thigh)—were to coil itself round a post it would take five strong men to pull it clear, *if* it let them.

"I like snakes, but I treat them very carefully. Particularly the ones with venom. They are deadly."

Within the Well of the Souls, on Monday, July 14, Day One of the snakes, people were approaching them with great caution. Outside of the experienced handlers from Animal Actors, the bravest, or most apparently brave, men were Kit West and Patrick Cadell. They carried the snakes re-

peatedly back into the shot when they coiled away to the edge of the set, toward the heat. Wherever the snakes wanted to be was not where the camera wanted them.

With a day's time, others became bolder. While Steven, David Tomblin, Dougie Slocombe, and others were dangerously perched thirty or more feet up in the heavens filming down, the crew hurled snakes out of bins, carrying them in armloads, and the watchers, still nervous, were enthralled.

Above, there were lightning effects to indicate the opening of the Well by Sallah and Indy. Down below the snakes were carrying on as they have for millions, trillions of years. Snaking, mainly. And all around—the human race in its many strange shapes, responding in its many guises. Fear, courage, anxiety, humor, revulsion, admiration; you name it, we experienced it. And yet, after the first few days—after the first few had escaped, after the problem of the fires had been resolved, after we had seen the tremendous impact of the rushes—the excitement disappeared, the interest waned, and by end of July, when the "snake insert dailies" so carefully dressed by Frank Marshall and Co. were screened, people were actually walking out. "Oh, snakes . . . I've seen them before."

Until the cobra.

I met Frank outside his office when the cobras arrived and took up their position at the head of the snaking order. Frank said: "Hey, you said everybody got used to the snakes, the tension had gone. Well, it came back with the cobra. A cobra killed a python. The python—the one that's been trying to bite people—bit the cobra. Well, he got his just deserts. The cobra killed him. Too bad. The law of—"

"—the jungle, Frank?"

"My words exactly, Derek. How did you guess? The law of the jungle." The snakes had come to the right place. A Hollywood movie.

One of the very real problems about having snakes on the set was that absolutely complete medical arrangements had to be made before filming could begin.

Frank Marshall explained, "Friday we were supposed to shoot with the cobras. We had to call it off because the serum man—there is only one in the country because there

isn't a demand for serum here—didn't come through with the stuff. We had to know we had it before we could shoot. So we sent to a hospital, but the stuff there was out of date.

"Friday morning came and no snake serum. So I went to the set, told Steven, and we decided that it was absolutely too dangerous to go ahead without having the serum on the set. We had the shot set up. Steven was ready. The cage was ready for the cobra. I was ready for anything. Steven, being flexible, changed the shot, tore everything up.

"We had heard there was serum in France, but then we found that there might not be any there, either. They couldn't tell us because of some technicality. They suggested we call someone in England and gave us a number. It turned out to be the same guy who had been letting us down in England. Oh God.

"So then we called the American Embassy, got hold of the Air Force Hospital and then the Naval Hospital to get them to lend us some serum just in case everything else failed. Steven went ahead filming around the setup, he had just enough to do without having to stop. And then Saturday, it arrived. From France.

"We started to film today, Monday, and what do you know? The cobra hooded first shot. Glenn Randall (stunt coordinator, who was on *Black Stallion*) said they had to wait two days to get the cobra to hood in the right spot. He couldn't believe it. And ours hooded straight off."

Harrison and Karen coped extremely well. Both were required to stand among the snakes for long periods. When it became really rough, Wendy Leach helped out as stunt double for Karen; and when it became really, really nasty, animal handler Steve Edge bravely put on Marion's white party dress and shaved his legs, and *he* became Marion, standing calf deep among the creatures.

The snakes turned out to be one of the great moments in *Raiders*. So it was all worthwhile—the serum and the ambulance and the doctor and two strong male nurses standing by. There were about 6,500 snakes involved, from the mighty cobras, boa constrictors, and pythons, down the snaking order to the little grass snakes with which we all became friendly. Steven had filmed snakes before in a memorable scene in *Duel*. Remember the farm at the gas station? Toward the end of shooting the snakes in *Raiders*,

Steven would stand directing a scene holding one gently in his hand like a string of worry beads.

July 17, a Thursday: the Well of the Souls and a lot of action. Steven is shouting: "In a thousand years . . ." Paul Freeman is up there at the top of the Well. Action: "In a thousand years," he shouts, "who knows . . . even you may be worth something. I am afraid we must be going now, Dr. Jones."

Somebody calls for "wardrobe." I am standing outside the Well of the Souls, out of reach of camera or snakes. I was almost in shot before. Oh dear. Karen Allen is carried through the cobras and the burning torches to where Harrison Ford stands. In the film she has just been dropped from a great height and caught. There are a lot of big fat snakes here. There are also security men from Heathrow, actually paramedics who look like security men. Pleasant chaps. Steven is wearing a *Star Wars* cap and looking very much like a director. There is plenty of tension but a lot of humor, too. Up at the top of the Well, perched perilously, seven folk: Steven, Roy Charman, Doug Slocombe, David Tomblin, Chic Waterson, Karen Allen, Robin Vidgeon.

In the snake pit now, Martin Grace and Wendy Leach are doubling for Harrison and Karen. "Action." There are some terrible-looking snakes. But it is not like the first day. People are not as frightened. Now they *know* which are dangerous and which are not.

Action! Now it's Karen: "You bastards, I'll get you for this." She shakes her tiny fist at her oppressors. To no avail. The only way out of here is going to be for Indy to climb the statue and bring it down through the wall into the catacombs. But all that's ahead.

Some Talk of the Louma Crane and Tom Smith, Makeup Man. Not a Good Day at the Raven Bar.

"This is the worst place I've ever been."

—Marion Ravenwood (Karen Allen)

The catacombs—less than a page and a half out of a script 103 pages long; about seventeen lines of dialogue. Maybe a minute and a half on the screen, but the horror, the impact are disproportionately more.

The set was narrow, delicately designed with scarcely enough room for the essential personnel. Inside, Steven Spielberg had to direct Karen and Harrison in his least favorite way: "Go left, go right, cross him, now you cross behind her." Inside, too, were Chic and Doug, camera operator and cinematographer, dealing with the marvels and limitations of the Louma crane.

What is it, this Louma crane that can do everything except boil an egg or peel a banana?

It is a remote-controlled camera on the end of a boom arm. No tracks need be laid to steady the camera since it is carried in the air. The camera can shoot high or low, suspended in the air, or in very narrow places where no camera could have gone before the Louma.

Spielberg used it first on *1941*, when it was very new. "I had planned to use it only for the mock-up shots simulat-

ing flight and for the big dance number in the middle of the picture. But when it arrived I thought, 'Hey, I can shoot a close-up and then just swing the arm around and do an over-the-shoulder shot without moving the dolly, without nailing down a tripod, without changing much.'

"It was a rapid-fire method of increasing coverage—I was able to increase my coverage about 20 percent."

The Louma operator aims the camera, and controls its focus, aperture, and zoom from some distance away. He views the scene through a video-monitor system. This screen presents a bit of a snag. As Doug Slocombe said, "You can't see what you're getting except on that beastly television screen, which is a very, very imperfect one. It's not even as good as the one you get at home."

A leading American cinematographer, William A. Fraker, who worked with Steven Spielberg on *1941* and on the Special Edition of *Close Encounters of the Third Kind*, agreed with Slocombe's complaints about the video screen. Said Fraker, "It is impossible to balance the lighting through a video-viewing system which cannot accommodate what film can accommodate and what the eye can accommodate. If you are lighting with a high ratio, it is impossible to view it accurately on a video screen."

The cinematographers light the scene as they know it should be for film and then simply accept the fact that the video will give a false rendition. But they have to fight off their instinct to do lighting corrections as a result of what the video says to them.

Slocombe added, "The screen also divorces the cameraman from the normal proximity he has with the subject he's photographing. I'll give you an example of what I mean by that.

"I very rarely take a rehearsal through the camera. If the camera's on the floor, I'm standing beside it, seeing the shot on the full-size screen, a hundred feet wide and thirty feet high. Standing there you can see every nuance of light and shade on an actor's face. You can see what every lamp is doing and you can see whether your fill light really is working—all those details. Whereas had I been looking through the camera, I'd only see a tiny little postage-stamp screen with a flickering shot in front.

"Now with a Louma you aren't standing next to the camera and you can't see details. They're just not shown

on the television screen—there the thing is sort of blurry and all the highlights are flaring and the shadows are so dense you can't see in them. It's a horrible mess.

"One just hates this distance between you and the subject—this interference—this *something* that's between you and what you're photographing.

"I know Chic hates it because he feels, once again, that instead of being part of the camera, which he normally is (I mean he rides that camera like a cowboy does a steer), he suddenly feels there's something between him and the camera. It's sort of like making love to a woman with a pair of thick leather gloves on, you know. It's that sort of feeling.

"Still, when its lenses give you something you couldn't get any other way, give me the Louma every time.

"I only wish half the pictures I've been on could have afforded it."

Inside the catacombs, the long arm of the Louma was picking up the hideous experience of Marion and Indy meeting the terrifying results of the art of Tom Smith, chief makeup artist on *Raiders*.

In creating the catacombs scene, following after all the activity and movement of the Well of the Souls with its snakes and fire and falling statue, and enemy figures condemning Marion and Indy to suffocate and rot, George Lucas, Steven Spielberg, and Larry Kasdan had introduced enormous visual horror.

Within the narrow set were skulls and many rotting bodies—the mummies that would terrify Marion Ravenwood and cause her to say, "This is the worst place I've ever been."

Tom Smith created those moldering mummies. A tall, gaunt man with wispy hair, a charming amused smile and still, at around sixty, a childlike delight in creating effects, Tom Smith came into films under the tutelage of Stuart Freeborn after World War II, in the very great days of the British film industry.

At the time, Freeborn, Tom's mentor, was chief makeup artist on *Oliver Twist* (director, David Lean) and on Michael Powell and Emeric Pressburger's *The Red Shoes;* so Tom was able to work as an assistant on these two fine

films. (So, too, did Dickie Mills, who did much of the personal makeup in *Raiders*.)

Some thirty-five years later, with Stuart Freeborn still completely active within the industry (he was makeup chief for *Star Wars* and *Empire*), Tom himself is now regarded as a wise elder in films. This surprises and amuses him. "I used to hear people saying, 'So-and-so is a character.' I used to say it myself. Now I overhear people saying, 'So-and-so is a character,' and I realize, wait a minute, it's *me* they're talking about."

Tom's office at Elstree, next door to Freeborn's, was headquarters for the creating of the adventurers spiked on the gate in the South American temple and the catacomb's mummies.

In order to insure that the models should be as accurate as possible, he began by sending to the London College of Surgeons for real skulls as examples, to get the dimensions right. "You can get 'skulls' from outside suppliers," he said. "Manufactured ones, but they're not any good because for some reason they're only eighteen inches in diameter, and a man's skull is twenty-two, twenty-three inches in diameter. You might as well get the size right from the start, so I sent for the real thing. And then made my own."

By stages, using a variety of modeling materials, from primitive to advanced chemical, he set about making full corpses in various stages of decomposition: hideously real decaying cadavers, so real that you could believe not only that they were *dead*, but also that they had once been *alive*. Smith fashioned twenty, and then others followed in profusion from the laboratories.

"I suppose it is a case of using your imagination to fashion agony into the face or the body—or what is left of it. Or some sense, at least, of death and its cause and effect. It is no use taking a cast of a face and then hoping it will have an afterlife. You have to *mold* it in starting from scratch. In many cases I would use child's plasticine, say, or modeling clay, or polyurethane, or rubber, latex, or plastic. There are so many varieties of things. It all varies according to your needs. You have to feel it out for yourself, it is very much an individual choice. But there are some certain requirements, of course, in the processing.

"Latex plastic you have to put in a drying oven for

twenty-four hours, thermal plastic you heat in an oven something like cooking a cake."

For some stages in making the corpses, Tom Smith used bathroom tissues, covering them with latex rubber. "Wet the paper, model it, push it here, push it there as you model it; prick it, roll the 'skin' as if it is decaying, and when it looks and feels complete and exact, throw the rubber over it.

"I made muscles, a whole mass of them, by binding them round with paper, painting the paper. And when you assemble everything, you have a body. It's not difficult. I raced at first to get something down, and as time went on I started to improve and improve and did more and more to each one, finally making a pregnant one to add a little extra to the group. You can have fun with the job, just trying to make each one with a character.

"If you have put everything in correctly—well, they have a reality and you almost say hello as you walk by them. I have thought, as I've finished one—well, if only I could breathe life into this . . ."

He laughed. We had been talking in his modeling room, bare of objects now except for a cast of the face of Satipo (as if just struck by the full impact of being staked and impaled) and a few remnants of other experiments. He gave me an early experimental drawing of the Angel of Death as it might look coming out of the Ark. This, or rather its successors—the finished work, the casts—would go to Industrial Light and Magic (ILM) for them to take up where Tom left off.

He has a very empirical view of his place within the industry. "You are only a cog in a wheel. A small cog in a wheel. No one can look at the movie and say, 'I did a good job.' You can say, '*We* did a good job.' You make somebody up, then a cameraman has to light it. Is he to say, '*I* did a terrific job lighting that'? No way. The film-processing laboratory has got in here and struggled about with it for hours and even then it can be messed up by the chap showing the film. Or enhanced by him if he's got everything right.

"We are all of us having to fit in with other people, rely on other people and make compromises, with the actor, with the director, or the producer or cameraman. You have never interpreted only your *own* vision."

With his long experience, Tom Smith has learned to collaborate peacefully and pragmatically with other departments. In laboratory makeup work he has a great deal of involvement with special effects. With the corpses in the catacombs he had to fashion some of them so "electricals" could be put inside. Then at the right time, Marion would meet one that "moved" an arm, say. All of this, from storyboard to her terrified scream, must pass through a labyrinth of team endeavor.

In spite of technology, there will always be a seat at the top table, as it were, for the sensitive filmmaker who understands how the human being seeing the movie will respond.

"In terms of shock effects, one has to be respectful of what people can take," Tom said. "You have to do something which is believable; even if there are things which are perfectly normal in real life, you can't do them in a film. You can only go so far because while it is okay to shock an audience, you mustn't *worry* them. You can't have them worrying, 'What happened there? What happened, what was that?' Because they are losing half the effect and the story, worrying for ten minutes or whatever.

"So you have to veer them away from that and give them instead a bit which they can accept and then another bit and then they have little bits and pieces which they can accept but nothing to worry them."

When I met Tom again, he was ministering to Paul Freeman, who was showing great courage in a thirty-minute ordeal—having a plaster cast taken of his face for the climax of the film.

The casting itself takes a minimum of twenty minutes and involves dentist's plaster. Breathing only through two straws protruding from his nostrils, Freeman was unable to move or swallow and was suffering, as everyone does in these circumstances, from sensory deprivation.

Tom remarked, "They begin to feel they're alone in the world and may never see anyone again. So you talk to them, stand by them, touch their hands, say, 'Hello, you're going to be okay, we're here, we're here. We're your friends.' You know. Make them feel that life is still worthwhile."

Phil Schuman, David Wisniewitz, and I were present during the casting of the plaster. I stayed throughout, and

they filmed the developing drama as the plaster set and, in some strange way, Paul Freeman, the spirit of the man, withdrew from the room as the plaster set hard. As it was removed, perfect, intact, and exactly as required, Paul recovered his identity like a creature emerging from a long winter sleep, wondering where the hell he had been. "That wasn't very nice," he said, but like all his profession, he bore it bravely. He breathed out slowly and thanked Tom.

Tom had a transparency with him of the face required for the final effect. In due course, the cast would be on its way to ILM in California, where it would be set in place for the blending of the optical effects for the opening of the Ark and the spectacular death of Belloq and company.

Although much of the time Tom and I talked about corpses and dummies and models, we also discussed doing makeup on actors and actresses. What were their perceptions of themselves, as opposed to how he perceived them?

"Well, you can't unhinge them, change the way they see themselves or how they want to see themselves, or want to be seen. Most of them actually look so much better when they come in in the morning than when they are made up. I don't look at them from a makeup man's point of view or from a *makeup* point of view.

"I love all the things they hate. You know—all the lilacs, violets, blues, freckles, all the faults of nature. They're the interesting things. The only fascinating things are the imperfections.

"Something which is perfect is very boring. A rose is a rose. It's beautiful, and as a rose it smells great, but, ah . . . when it starts to die! Marvelous shapes and colors.

"Marilyn Monroe had hips and dimples here and dimples there and they used to run around saying you couldn't photograph her in this position or in that position because you would show all those little indentations. Well, to me, *they* were what was fascinating."

"Not a good day," Steven has just said.

"Why not?" I wondered.

"Things are taking too much time," said Steven. "The schedule is pushing me. That's what determines my progress."

It is not like him to complain. We are on stage two, the Raven Bar.

Kit West and his men are putting squibs (explosive charges) in the wall. This is the day of the Raven Bar fight. There is no way in which this could be easy. Steven has gone next door to stage three to supervise the falling of the statue. Everyone is taking great care of people and property today. Squibs, bangs, high falls (well, high-ish). When everything is most obviously dangerous, people here are most protective and alert. No doubt it is when everything seems easy that things go wrong. Still I shall be surprised if much goes wrong on this film.

There are now a lot of bangs. Jack Dearlove tells me to put my hands down: "You don't need to cover your ears," he says. "Open your mouth. Don't clench your teeth. That's the way to deal with bangs." Jack was "in The War," as we say in England and here that means World War II.

Harrison Ford has arrived for his coffee, which Jack makes at frequent intervals, filling up a two-pint Thermos flask. The coffee is strong and good and Harrison drinks it without milk, cream, creamer, artificial sweetener or sugar. Just coffee. He says he is very hungry. He hasn't had breakfast. Jack Dearlove says *he* has. "The best breakfast," says Jack, "is a raw egg, hot milk, not boiling, a scoop of honey, and a large brandy. Wallop!"

"You make your own breakfast?" asks Harrison.

"It's good for you," says Jack. "Good for you if you are feeling low. Good for you if you're not feeling low. Just plain good for you. Wallop." He is unlikely to be wrong, as usual.

Later we go to rushes. Terrific set of rushes. Karen was wonderful as Marion. Steven was pleased with that. Ron Lacey as Toht the torturer, terrific with the red-hot poker ready to do unpleasant things to Marion's face. But the afternoon *is* dragging. It's not just me. Perhaps the Raven Bar is tiring people. There is a lot of smoke and it is a bit claustrophobic. But it will contribute to a very strong scene. The arrival of the Nazis out of nowhere is very effective. The set is extremely dramatic and in fact there is no doubt this is a very strong adventure film.

On Location in England.
What Does a Stand-in Do?
Stories from the Associate Producer.

"The end result is that we are going to have a great movie."

—Robert Watts, Associate Producer

On Thursday, August 14, extremely well-mannered and having been requested not to smoke cigarettes, pipes, or cigars on the premises, we laid gentle and cinematic siege to the Rickmansworth Masonic School, as it is now known. (It was then known as the Royal Masonic School for Girls.) It is a grand establishment founded by a grand man with the grand name of the Chevalier Bartholomew Ruspini in 1788 to "protect its pupils from the adverse forces of society against which, by reason of their youth and circumstance, they were defenceless and to provide an environment in which they might grow into self-reliant and confident adults." Progressive and comforting words for those days: one year before the French Revolution and twelve years after the American Declaration of Independence. Those were not settled times.

Set in 400 acres of parkland, the school has magnificent stained-glass windows (Edwardian, some of them), a chapel which claims to be one of the most beautiful school chapels anywhere in the world, and a paneled hall 120 feet long by 58 feet wide. The place, from floor to ceiling, whis-

pers of immense bequests from rich freemasons and of Royal patronage. The British Monarchy and its extended family has long associations with the wonderful world of freemasonry. The continuing influence in British life of this extraordinary body of go-getters is due in great measure to Royal favor and to other powerful spinoffs of the brotherhood. It is not to my taste. Too secretive.

The Masonic School is one of the best examples in Europe of unspoiled classic thirties buildings, brick built and unaltered and, for Steven Spielberg's purposes, a first-rate piece of location-finding. The school will serve for Indy's classroom and the Washington, D.C., government office.

Steven Spielberg was generous in his praise for the setting of the day's shooting. After a long and successful morning's shooting (Indy teaching class was the morning setup, with Harrison in a good tweed suit, wearing his own scholarly glasses), Steven and I came to rest in the same caravan on the edge of the school lawn.

"It seems like we don't *have* bricks in L.A.," Steven remarked, "just plaster."

He wondered how many bricks there were in London and environs. "Maybe just confine it to London; just find out how many bricks there are in London alone." He turned to Kathy Kennedy, who was typing nearby. "Hey Kathy, there must be a way of counting the bricks in London, maybe by sectioning off one area and counting those bricks and working it out from there."

She pointed out we were ahead of schedule; maybe that would leave time for such an exercise. Steven was on to something new: "We *are* two days ahead. We would have time even to count the bricks. And also I am going to have George (Lucas) go light Indy's cabin for the whole scene. Here he is in England, let him light it. I'm going to work him to death! He had a great time in La Rochelle."

Steven had been joined outside the caravan by David Tomblin and Harrison Ford. "We can do the blue screen (special effects shot) next week and I think cut a day out of it. And today is going real good. We'll be out of here by tonight." That meant Rickmansworth would take two days instead of three.

The school clock chimed 2 P.M. Lunchtime was over.

Earlier, I had my first sighting on set of Denholm Elliott,

one of Britain's most employable and most employed character actors—able to play anything from wronged husband to soldier hero to courteous museum curator, the latter of which he was playing in *Raiders*. A quiet, much awarded actor with many friends and admirers in Britain and overseas, Elliott brought distinction to the set and moved easily through his part as Marcus Brody, wearing stout English shoes and a burly suit.

I watched him from a distance, marveling at the ease with which good actors make their work look so simple when it is so difficult, and talked in whispers to Jack Dearlove, Indy's stand-in, who told me he had worked with Denholm Elliott twenty-seven years earlier.

Jack whispered many stories of accepted scams from those days—certain crew members had secured guaranteed overtime. The patina of passing years gave respectability to what were actually naughty tactics. Who was to blame them now, those scalawags from long ago? They would have to get up *very* early in the morning to take such liberties with Lucasfilm, I thought. Howard Kazanjian and Frank Marshall have eight eyes between them.

Steven was obviously happy at Rickmansworth. It was sunny and nice, George Lucas was in town, the movie was ahead of schedule, and it was good to be out of the smoke machines of Egypt and Nepal. And also, Steven was enjoying the new Frank Sinatra album *Trilogy* on his headset.

It was impossible to get into the rooms where they were filming so I wandered around the workings of the location, marveling at the hundreds of coiled yards of heavy wiring bringing reliable power to the set.

The school drew me inside, to walk through the corridors bearing snatches of Chaucer, Browning, and Shakespeare on the stained-glass panels. The mood of the place was very correct. On a notice board in one room was a set of instructions which explained why the building was in such a fine condition. "Any girl who is discovered to have written on, or in any way defaced, a table will suffer the following penalties: restore or clean desk to original condition or pay for this to be done in extreme cases. Boarders will have fifty pence taken away . . ."

Strict litter duties were listed, and there were notes on fines, orders for tidiness and for "lights out."

Outside the building, the foundation stone read: "Royal Masonic Institute for Girls to the Glory of God, the Great Architect of the Universe, this stone was well and truly laid on Wednesday July 16, 1930, by his Royal Highness the Duke of Connaught, Most Worshipful Grand Master."

Thirties indications everywhere: even on the outside drainpipes, the date 1930 in cast iron. In the hall, photographs of King George VI and Queen Elizabeth (now the Queen Mother) as they were in those days; here, in Rickmansworth, one felt that Steven was indeed making a period picture.

"You are a romantic fool," said a nameless voice over my right shoulder. "Do you want a lift to the studio?"

"Oh . . . yes. Thanks."

And so back to Borehamwood; it was 1980 and it was beginning to rain. I asked my companion if he could devise a way of counting all the bricks in London. Did he have any ideas on the subject?

"I think this movie is getting to you," he said.

"It wasn't my idea."

"Well, keep on with the light food and get plenty of rest," he said.

Well, okay . . . but there must be a way of counting the bricks. . . .

At Elstree, there were actually three Marion Ravenwoods. There was Karen Allen, who will see her name in lights; there was Wendy Leach, her stunt double, whose salary goes up in leaps; and there was Mercedes Burleigh, Karen's stand-in, who goes home to her children each night.

Mercedes is an actress, too. She is, like Karen and Wendy, a member of the actors' union and qualified to play anything from Peter Pan to an Ibsen heroine if she got lucky. But for *Raiders* she was a stand-in.

The stand-ins and I had something in common: we all had plenty of time in which to watch. One day I asked Mercedes what it was like being a stand-in.

Mercedes said she had three children, aged fifteen, thirteen, and eleven. She was separated from her husband, left home every morning at seven o'clock before the chil-

dren woke, and drove to the studio to be there at the same time as Karen.

Her mother and children got along well and her sister helped as much as she could. In any case, the children went out a lot, stayed with friends, and were well and happy.

Mercedes was uncomplaining. She found being a stand-in boring, but it beat sitting in an office. "That would drive me mad."

Mercedes stood in for Karen during lighting and other preparations for new setups. What else was required of her?

"To wear the same color as she does. Today Karen is wearing a pink dress so I am wearing a pink tee shirt. Some cameramen want one to wear makeup. This one doesn't mind.

"Just to be on hand, that's another requirement. To be at the set, to be pleasant and in the background but alert, and listening when they actually might require you. The only time you can relax is when you know they're shooting a scene with your artist which is probably going to go on for some time. Then you can sit down and look at a book. Talk. Think. I do a lot of thinking.

"I am really an actress. To me, doing stand-in is basically boring. It doesn't require any skill or talent just to stand before a camera turning this way and that. But it is a job that has to be done, isn't it?

"It requires certain restraints, and that is all it does require. But on the other hand you can make the best of it by learning what is going on. The opportunities to pick up things are amazing—listening to the director, watching the lighting cameraman.

"Personally I think it's a fantastic way to learn about the business. Years and years ago people who started out as stand-ins were picked up and became stars. Clark Gable was one and there were many others. Today there is no room for 'maybe.'

"I am in the Film Artists Association because that is the organization one has to join in order to get stand-in work; you don't have to be a member of Actors' Equity. *I* am because I wanted to get a full card to do West End (London theater) shows and all that. I did forty weeks on television to qualify.

"I love acting. That's my basic thing. But I am very slow

at getting around to doing things to help myself, and of course having a family is limiting. Personally I would have loved to have joined a repertory theater; that is wonderful training, great experience. But I have to earn money, and stay around for the children. I can't sit around waiting. My brother is an actor and he lives at home, can wait three months or more for a part. But when you have three growing children, you have to keep moving."

None of this was said in a mood of anything but chirpy acceptance. Nobody ever told actors or actresses that life would be easy. And Mercedes Burleigh has had a vivid home life and exults in the memory of the whirl of her childhood and growing up. Her father, Lionel Burleigh, was a great London character who got into "scrapes" in the art world. Much loved by the media and beyond, he had a play written about him; it was put on in the West End, starring Rex Harrison as Lionel. The title was *The Lionel Touch*.

"Joyce Redman played my mother. It was a lovely play.

"What did my father do? Crazy things in the art world. And other places. He was accused of stealing the Goya painting of the Duke of Wellington when it disappeared from the National Gallery, things like that. He didn't, but they thought he did because he *could* have. He also put a lot of his own paintings up when they put on a Picasso exhibition. Do you remember that?"

I did. Lionel Burleigh was one of the atypical "types" who get through the net and express themselves *as* themselves, doing what comes into their head. Some end up in jail, some in high places, but very few are played by Rex Harrison on the London stage.

Mercedes said she had been happy working on *Raiders*. She thought Karen was a good actress and liked Harrison's work too. "This has been a wonderful film to work on, thoroughly enjoyable and very interesting. I don't know the plot, haven't seen the script, but the design has been wonderful, the sets . . . and they have some good stunts. I should think it is going to be a highly successful film.

"It's hard to say, though, isn't it? But you can't avoid coming to conclusions. I like the way Steven Spielberg works—he doesn't lose his cool, shout at people, make them feel intimidated. A lot of directors do."

Tall, slim, dark-haired, in her early thirties, Mercedes

Burleigh was called to the set. Walking like an actress, confident, jaunty, she said over her shoulder: "I'll tell you who else I like, Peter O'Toole."

She stepped into the lights, lifted her chin and began to obey instructions. It was the altar set on stage one. She and Jack Dearlove as Indy pretended to be tied to a post.

They also serve who stand-in and wait. . . .

How was anyone to know things were about to go wrong?

I had been talking to Frank Marshall about the progress to date. It was August 18. The filming had been going on for forty days and was on schedule.

It was true to say, said Frank, that everything was under control. "I am going to have a nice evening watching British television," he declared. "With a drink or two and who knows . . . ?"

He certainly was relaxed.

But back at stage five after lunch, there was something in the air. It wasn't the usual aromatic melange of smoke machines, dust, plaster, glue—the smell of movies—but something more pungent, the smell of an abstract. People talking in huddles, walking quickly.

Was it war? No. The death of a President? No. I didn't think so. Frank was on the stage, ready as ever to communicate. "What's happening?"

"We'll have to walk as I talk if you don't mind," he said. We proceeded on the trot. "Robert Watts has been taken to the hospital with appendicitis. And there is a problem in Tunisia. Things aren't getting in through customs. Robert was to have gone. Now he can't so I'll have to. Bad luck, huh? For Robert."

"How bad is Robert?"

"Well, he won't die. But he's not that good. We've lost him for a few weeks." He added that he was going to Tunisia immediately. "Barbara (Harley, his secretary) has arranged transportation, here to Heathrow, a good flight to Tunis. Then threaten Tarak (Ben Ammar, head of Carthage Films of Tunis, a sort of Joe Frazier to Frank's Ali). Not exactly an enemy, not exactly a friend, but always there, in conversation, in an adversary role. We have all the customs documentation done, everything is complete.

Still they won't let it through. Now I have to go and threaten. In a nice way, of course.

"Robert would have gone, so we're now short of a good man. We have a blue screen tomorrow; Wednesday, the tent. Then second unit, which I'll be back for. I'm leaving notes. Much rather do this than sit home watching television.

"So I won't have my simple evening of cocktails. I'll work instead. These things come out of the blue, don't they?" And with a wave and a smile he was away in the car from Elstree to Africa.

Robert Watts had his appendix removed and we did not see him for another month. Robert missed out entirely on the Nefta/Tozeur adventure, which was a pity because he and Norman Reynolds (as well as Kit West and Steven, a little later) had been in at the start of that location. They'd seen it when it didn't know it was going to be snatched from the apparently featureless nothingness of just a part of the vast Sahara to be immortalized as the location of the famous Well of the Souls where the Lost Ark of the Covenant had been hidden for all those centuries. Locations are like goldfish. They don't know how interesting they are.

So Robert rued the day he felt one hell of a pain in his stomach and then realized it wasn't going to just go away.

Robert was an interesting figure, punctilious and upright, sandy-haired, misleadingly stern-featured. In fact he was very amusing and a thoroughly fair chap. He had been to one of the famous public (private, to Americans) schools, Marlborough College, and then to university in France before serving as an officer in the British army; one of the last frontier characters in the dying days of British West Africa. From these twin sources he had achieved a stiffness of bearing and language that belied his innate romanticism.

For Robert Watts was a dyed-in-the-wool devoted filmmaker, good at his job and completely hooked on movies and their creation.

After the shooting was all finished, long after, Robert had reassumed his position as associate producer, holding his end together so well that people wondered how they had managed without him. I returned to Elstree in November to see him.

Deserted now by Steven and George, by Frank Marshall and Howard Kazanjian, bereft of actors and craftsmen, the *Raiders* enclave was still a cheerful bustle of post-production activity with Pat Carr and Gill Case, Daniel the runner, and the accountants as busy as I remembered them all those eons ago in the summer before the wicked Raiders found the Ark and blew themselves into the heavens forever.

He recalled his early travels, nearly a year before, to seek locations with Norman Reynolds. "In January we left England and went first to L.A. for a week of meetings (with George and Steven and company) and from there to Hawaii looking for a South American jungle and, as there was still a Shanghai, 1936, sequence in the script, a Chinese street location, too.

"We couldn't find Chinese streets in Hawaii, though, of course, there *was* jungle, so we went on to Hong Kong via Tokyo." There was nothing suitable in Hong Kong, which had been built up, modernized, with hardly a trace of the old street scenes. They tried Macao, a possibility for streets, but that had no jungle. The aim was to find both in one place. So then they tried Malaysia.

"We went to the island of Penang and there we found great Chinese streets and great jungle. So we had South America and Shanghai within forty-five minutes of each other and that's where we decided to shoot."

Then home via Bangkok, Thailand, and Bahrein in the Persian Gulf; they had been all around the world.

"We began work on the Chinese set, the interior, when we returned. Very shortly afterward, it was cut from the script. So that was the end of that. It was also the end of Penang. We didn't need to go to the Far East for jungle. We had that in Hawaii, so Hawaii went back into the scene.

"The rest of the preproduction was getting Steven over here and to Tunisia."

Robert, Norman Reynolds, and Kit West went to Tunisia with Steven. Norman and Robert knew the terrain well from *Star Wars*. Norman said of his first sight of the desert location, "I noticed palm trees sticking up and thought it had possibilities, so we went with Steven and walked through a series of sticks and pegs showing where things would go."

Robert Watts recalls: "Steven decided that Tunisia it was, and work began. He was only in and out very quickly because he had a lot of other irons in the fire, shooting extra footage for the Special Edition of *Close Encounters* and completing another movie of which he was executive producer.

"The other important factor to consider in preproduction was the submarine. We needed a World War II German U-boat and found one that had been built for a German film and TV series, *Das Boat*. That was lying in La Rochelle in France. I had imagined something that could be dismantled, crated, and sent anywhere. But when we saw it, we realized it couldn't be transferred, so we had to do those scenes there, in La Rochelle, which added France to our schedule.

"The submarine was lying in a former Nazi sub pen that had been built during World War II, an enormous concrete edifice that was too solid to pull down. So we decided that we would also use the interior of the submarine pen, and make it like the Nazi interior base. It was a bona-fide German construction. It even had German writing on it from the war.

"We ended up shooting one week in France to start with. Shooting out at sea, which is always risky. The contract with the Germans who owned the sub said that we could take the submarine out to sea only if the waves were less than a meter high. We had the engineer from Munich who had built the submarine because I insisted that we have somebody who had the authority to say that we could go or couldn't go. It was a very valuable piece of equipment and I'm no expert on the sea or on measuring if the waves were a meter high or not.

"The first two days we were due to film—the first two days of actual filming on *Raiders*, remember—it was impossible. The sea was just terrible. The third day, Wednesday, it was calm when we went out and we shot all day there. And we shot all day Thursday—it developed into a rough day but we managed to get through even though I was worried that the waves were getting too high. We completed our sea stuff on Thursday and on Friday we just had some night shooting to do on the dock. We actually finished La Rochelle fifteen minutes ahead of schedule. I had

reckoned that we would finish at 11:00 P.M. and we finished at 10:45.

"So that put us on schedule out of there. That had been a great concern to me because dealing with sea shots, you can go many days over just because of bad weather.

"Then we were back to England and the studio, where we did very well. We actually went to Tunisia a bit ahead of schedule and got ahead again by one week. That caused another worry—whether the sets would be ready in the next country.

"Our problem was that, having established the framework of what we were going to shoot, we were now getting ahead of that. You don't say 'Hold on, we're ahead, let's take two days off.' You continue and therefore everything backs itself up. We were very tight to start with. Norman Reynolds' problems with design and construction were how to be ready in time for what came next.

"Mine are, in the main, logistic. Like Monday, September 22, when I arrived in the streets of Kairouan. Steven came to me and said, 'I'm going to finish a day early.' That sounds great *except* that we had a unit move from Tunisia to Hawaii, which is no easy thing. That whole move had to be done one day earlier.

"The move out was made all the worse because the day the unit moved, the Canadian air-traffic controllers decided to have a one-day strike, so all the polar flights were held up. I was already in Hawaii but the bulk of the unit moving got stuck everywhere and some took *forty hours* to reach Kauai.

"I had allowed enough time for them to have rest periods, because it's a long journey and there's an eleven-hour time change. They were going to overnight in L.A., but, of course, the ones that were on the polar routing never got that rest: they were traveling constantly. They eventually arrived in Kauai about lunchtime on September 29. They were due to start shooting on Tuesday the 30th, so we sent them all to bed and we did start shooting on schedule.

"All our stuff in Hawaii, every single location, was very difficult. The first one was down in a pit, like a mini-canyon. There was a pool and a waterfall: a lovely-looking location but very difficult to get into. We had to build steps down an almost sheer cliff to get into it, and all the heavy equipment had to be put in with a crane from up above.

And the thing was *full* of mosquitoes. We had to spray it every day and spray *ourselves* every day, but that didn't help much.

"The next location we could reach only by river, so everything had to go upstream by boat. One of the locations for the trek—we were doing the trek stuff for post-production credits—we could reach only by helicopter. We had to take everything in by helicopter, including two donkeys."

In retrospect, Robert Watts took a very positive view of the film. He said the momentum had started from the first day. "Sometimes you think it will lessen when you leave location and get back to the studio, but it didn't. It kept up. Steven was pushing very hard.

"There has actually been nobody on this crew, nobody at all that I don't want to work with again. It has been absolutely wonderful."

One knows this is true because in the film business one doesn't commit oneself in that way. Very often, it's "See you." And you make damn sure they don't—not if you see them first.

But not on *Raiders*. Robert added, "I think it may be that everyone worked so hard, got on with it. And the end result is that we are going to have a great movie."

The Flight to Africa;
A Wild First Day at the Digs

"What my next movie is going to show is why and how it costs so much money to make a movie."

—Steven Spielberg, Director

Africa! A flight to Africa after such a summer in England.

What a churlish fellow I would have been not to look forward to our Tunisian adventure. And it was good to see that all around us at Luton Airport, happy, optimistic faces belied the heavy workload to be faced under the cruel sun.

Lining up at the airport that is the drab gateway to so many budget vacations, we looked only on the bright side of life: itchy-fingered vacationers around us could grab at junk food and souvenir ball-point pens and cheap sunglasses, but we were show folk, traveling romantics; we were in the big time heading for the hard desert to make a movie. We were cool.

Luton Airport, where hopes always run as high as the cliché, and the duty-free shops take almost as much as Harrods at Christmas, was host that day to sixty-six of us movie folk. We were setting out to plunder the majesty of the Sahara under the blue dome of the Maghreb—the umbrella name for all of North Africa—to film make-believe events on the bed of an ocean that dried up 200,000,000 years ago.

We grouped in small units based for the most part on earlier relationships, whether friendships or job-related

closeness. But where at Elstree we had all gone to our homes in the evening, now we would be flung together in the whirlwind of filmmaking, at speed, under pressure, in great heat and considerable hardship. It was only right and proper, therefore, that we get together at Luton, to group and regroup, talk to our neighbors, admire each other's hats, and so on.

Although several of the travelers had known each other for ten, twenty or more years, many had not, and quite a number of barriers came down in the lines waiting for pre-flight documentation as production staff passed among us handing out coded color labels for our luggage, indicating hotels at the other end.

A lot of the men had had haircuts—the old desert hands in particular. I had not. In fact it was longer than it had been all year. What a fool I was.

And talking of hair, where were our bearded leaders? Not lining up anywhere that I could see.

"Ah, there are George and Steven," said a voice, a Londoner, male . . . to my northern ears indistinguishable from so many of the others. The film business in England employs mostly Londoners and suburbanites from the outer limits of the capital.

Both George and Steven seemed shy.

My, we Brits are a knowing bunch of bastards, I thought; I would not care to spring from another culture and break into a bunch of us. Where was Harold Kazanjian—oh, there he is. And where had these three been? Not a VIP lounge, surely . . . not in this most plebeian of all British airports? And yet they did have that sheepish look of privilege unmasked. If there was a VIP lounge it couldn't have been up to much at Luton.

We were now all facing equal scrutiny as we passed the point of no return to take our seats for the African coast. My seat was 22F, neither near the front nor near the back, a center seat of three, between, on my left, Joe Gibson, a cheery stand-in, and on my right, Pamela Mann, continuity, absolutely and hugely competent, very high up in Spielberg's pecking order. In her other life, she is married to Freddie Francis, a cinematographer of great distinction (among his films: *The Elephant Man*, and *Sons and Lovers*, for which he received an Academy Award) and also a di-

rector of many horror films with terrifying titles and a lot of blood.

We took off, flew above the clouds and into the sun that would become our relentless companion for the next however-many weeks it took to tell the tale Steven Spielberg's storyboards demanded. The seat-belt and no-smoking signs were quickly turned off, and the drinks arrived in very quick, smart batches, for the people who run nonscheduled charter flights know that British and sun-bound travelers develop an instant, urgent longing for an alcohol fix. The Americans sipped their coffees and club sodas and orange juices and Cokes and Tabs and so, for that matter, did I.

Many of us stayed in our seats for half an hour or so and then moved around to stretch our brains a little. I noticed quite a few people with Sony headsets. This was one of the crazes of 1980, if you can remember that far back, and I had just received mine the night before so I was still clumsy and unfamiliar with it and therefore slightly shy. It was to make things much more fun in the weeks that followed, as all who owned them discovered, but they were not to everyone's taste.

"I notice everyone's got one of those contraptions, just to keep up with Steven Spielberg," said one Briton, exaggerating the numbers on the one hand and on the other hand, rather underestimating how easy it would be to keep up with Steven.

"Onanism," overstated another Britisher. "It's a sad thing to see a pretty girl lost in one of those things, alone, smiling all to herself privately. Just onanism! That's what it is."

Roy Charman, in charge of sound on *Raiders*, gave me a straight challenge: "What *are* you listening to on that thing?" he asked.

"The Andrews Sisters," I replied.

"*You* don't remember the Andrews Sisters," he said. I did, though.

And so time passed and drinks passed and meals were either eaten or pushed around the plate. "We are commencing our descent. . . ."

The town into which we were dipping out of the sky, Tozeur, was an oasis town, a capital city in the area of Jerid, with 13,000 population and 200,000 palm trees. It is

very old, had been a way station on the Roman Road and as long ago as the fourteenth century had been an active market center with a population of up to 100,000.

Nefta, not too far away, where the full *Raiders* HQ would be established—indeed had already been set up by the advance party led by Frank Marshall—had 152 springs irrigating 400,000 palm trees. And if you wonder why these palm trees and their numbers should be of so much importance, remember that they are a crucial life-support system not only because they supply their own fruit but also because the cool air circulating within the plantation is necessary for the cultivation of all manner of fruit and vegetables—pomegranates, peaches, apricots, bananas. Outside these oases, little survives except the Bedouin travelers and what they can carry or drive; their goats, sheep, cattle, and camels.

Oasis life is like that on an island, a pattern remote from the ordinary world. And it was from British suburbia into that, which we were now landing our Western bodies and souls.

At first, it seemed we were about to touch down in nothing but sand. Only those with a certain angled view could see the airstrip. The airport itself was very new. One small building became our instant Africa. All manner of quick impressions: Terrific heat. Flies everywhere. Sand. President Bourguiba's portrait on the wall. He had been president for twenty-five years, solid as a rock and protected by the French sphere of influence.

Patrick Cadell, second assistant director (now alone at this rank, for Roy Button had gone to another movie), welcomed us to Tozeur, addressing each of us by name at speed, and with adroit and very real courtesy directed us to our vehicles. God, it was hot out there. . . .

David Wisniewitz and I decided to take the bus. Harrison, Karen, John Rhys-Davies, Paul Freeman, Ron Lacey, George Lucas, and Steven Spielberg were away quickly to the big hotel in Nefta. That left two other destinations indicated by color tags on our luggage. Mine was blue: the Grand Hotel de L'Oasis in Tozeur, a few minutes away. Well, that was convenient, even if it was a two-star! Never mind, plenty of space for resentments ahead, I thought.

As it happened, with certain obvious exceptions there

was a very democratic allocation of living accommodation on *Raiders*. Problem was, as Frank Marshall had discovered, there were altogether too many of us for the rooms available in the three hotels in the two towns.

We went by bus to the Grand Hotel de L'Oasis and found it was quite all right and funky enough. The telephone number at the hotel was 13. I didn't receive one outside call, which suited me quite well; but it didn't mean no one called me. Communication was not good.

The chief ambition of most of us at the Oasis Hotel was to get away from it to the Sahara Palace. And it took some time for those of us who settled down in the Oasis to realize that it was possible to like, even to get to *enjoy*, the place. At first it was quite unpromising. At the end it became utterly lovable.

I liked my room quite a lot. It had two beds. Always useful—one for putting things on, the other for lying on or in. I picked up my telephone to call home. "No. Downstairs," said a ratty voice. "Okay," I replied. Then I just lay on the bed and thought about the life of regular filmmakers, roaming the exotic places of the world to make someone's dreams come true. They may *look* like hard practical men and women and in fact they may *be* all of that, but their true essence is romantic adventure. They are in fact *romantics*.

And then I went to sleep, waking a couple of hours later to hear the phone ringing. It was David suggesting a meal and then a walk to look at the town. We found an amateur drama group entertaining a happy, noisy audience with a slapstick Westernized farce in which various people lost their trousers, and the leading lady beat the menfolk about the head with a broom. Laurel and Hardy of Arabia. It was 2 A.M. Somewhere the dogs were howling and somewhere else men were heard singing loudly and in large numbers.

In the morning, Sunday, a day off, hardly a care in the world except how to tell my wife Joan I am well and okay. Picked up the phone: "Non. Downstairs."

"Okay."

Most available cars headed across the dry brown apocalyptic landscape to the Sahara Palace Hotel. That was where we would find out the plans for the weeks to come.

A travel writer from *Le Figaro*, a leading Paris newspa-

per, said of the Sahara Palace Hotel that the room rates made it clear that it was "no mass tourism hotel." The site, he went on to say, had been chosen by Edgar Faure (a French lawyer and politician of renown) and it had been built on a bluff, a high steep bank.

The hotel had been terrifically well appointed and had an Olympic-sized swimming pool and a fabulous view of the oasis of Nefta beyond which stretched the wondrous and reliable mirage of Chott El Jerid.

What a place! You can get off your bed by the pool and ride a camel down to the irrigation channels to another world where life has not changed much since I-don't-know-when. Or you can just pose on a camel for a photograph which is what Steven Spielberg was sport enough to do the afternoon I left Tunisia: September 14, that was, and he was so relaxed it was a sure sign he believed by then that he had *Raiders of the Lost Ark* licked.

The pool and surrounds of the hotel were decorated by *les Anglais* (and a few Americans) in various sun-related conditions and positions. Some who had been with the advance party—construction workers, stunt men, and their wives—were tanned and much at home. The stunt men were conspicuous: confident, fit, and amiable. Affluent as bankers.

Others, newcomers who had been on earlier vacations, were renewing old tans and there were, here and there, the pale flowers of the pool arrangement, the pink and white beginners, taking cautious liberties with the searing sun.

There were also the swimmers, many of them children, rarely out of the water; and the table-tennis players; and a final group, those of us who are rarely undressed, even in the tropics, choosing instead to adjust and slowly bake.

The *Raiders* crew, actors, and company seemed to comprise most of the people staying at the Sahara Palace, where we had now been joined by a substantial number of Tunisian film people assigned to the project by arrangement with Tarak Ben Ammar of Carthage Films.

After lunch, I was wondering what to do with the afternoon when Marty Casella, assistant to Steven, came by and said he was going for a walk to Paradise with Karen Allen. Would I care to come along?

Paradise?

Marty said he had heard it was not too far from the hotel. Well now!

Children came up to us and offered to be our guides *(les enfants du paradis?)* and we chose the cheekiest, who asked us our nationality through a series of signs and broken phrases. Hearing I was English, he pointed and said: "Kevin Keegan."

"Well, no. I not Kevin Keegan, but he very good footballeer,' I said, slipping flawlessly into the broken English we all use to "help" foreigners.

"Kevin Keegan," he said again. "You come, Kevin Keegan." He danced about as if on a soccer field and I told Karen and Marty that Keegan was the great captain of England, and known far beyond those islands as this boy evidenced.

We were with the right guide! Any boy in the middle of the Sahara who knows Kevin Keegan and who will take you to Paradise can't be all bad!

We soon found ourselves in a wonderful place, shaded by nature, a half-hour from the hotel and a thousand years as well, cool and remote from anything to do with anything we had known that day.

Here, in Paradise, old men had staked out their scrubby gardens and set up now and again primitive tourist traps with dusty carpeted patios (if I may use so crude a word) offering fresh mint in branches and coconut milk in clay cups. Marty refused his drink and warned us not to touch ours. Our old man laughed and pushed his hands at us. He knew what we were up to. Mistrusting him! Spurning his hospitality! Silly Westerners.

I tried to do what they do in movies—pour it behind me—but succeeded only in pouring it over the blanket on the strip of wall on which I sat. The old man pretended to cry.

Walking through the trees, ever downward, we came finally to the "river," an irrigation channel probably, and saw, coming under a palm frond, Ron Lacey leading a middle-aged middle-class tourist whom he had met paddling in the channel. There was a donkey in there somewhere and, of course, a guide. "What a surprise meeting you, and what a pleasure too," he said graciously, and we talked about our good fortune and passed on and eventually climbed again, up through the plantation.

It was getting late. We had come now to the edge of a bluff and saw around us the detritus of much domestic activity, some of it very old. Nothing but garbage underfoot, now neutralized by the hard hot sun, so that there was no smell; fresh garbage would, in such quantities, have been a ripe scent indeed. It was not, however, Paradise. It was poverty we were looking at now, and I gave the Kevin Keegan fan some coins.

Education is not compulsory in Tunisia and there are no free lunches. Our guide was one of the lucky ones. He was both literate and healthy. All the children we saw looked well, but not all of them have a real stake in the future. One Tunisian, it is said, must support five. So it was good that the foreigners were there with our loose dinars, and let us hope that some more of the dollars left behind in Tunisia by the *Raiders of the Lost Ark* company reached *les enfants du paradis*.

Karen, Marty, and I made our way back to the Sahara Palace Hotel without our guide—we sent him on his way reluctantly. We were tired and it was hot away from the shade and it was one thing if Marty or I became ill from all this garbage, but Karen Allen was the leading lady. (We tended to forget this, such was her freewheeling lack of presumption.) She should not be hanging out in rubbish heaps on the first day in Africa.

After much climbing and stumbling, we pitched up on the steps beneath the hotel where, like women in these parts for centuries before them, Rita Wakeley, wardrobe mistress, and her team were banging Arab robes on stones and drenching them in water. Not to wash them, but to make them look lived in. Next day, 600 Arabs from the 1980s were going to have to dress and look like their grandfathers and the camera would pick up anything out of place.

Monday I drove to Sedada for the first time. What a place. One hundred acres of Norman Reynolds' production design from George Lucas' vision of a Nazi archeological dig in the 1930s, as storyboarded by Steven Spielberg and art-directed by Les Dilley.

Norman Reynolds, like everybody on the set that first

day, was very impressed with the atmosphere, the hectic energy of 600 Arab extras, the thirty "Nazis" supervising the digging for the Lost Ark.

For a while on that first morning George Lucas, Steven Spielberg, and Howard Kazanjian sat on the canvas seats with their names slotted over the backs. It was not a sight we ever saw again.

George and Steven and Howard were talking. Frank was on his feet and moving quickly around the first setup, which required John Rhys-Davies as Sallah to pretend to be a stupid Arab working for the bullying Nazis, one of whom is hungry and demanding food. A little scene; but they were tense, no doubt about that.

Steven said, "You know, the one great thing that made *Lawrence of Arabia* live was that every shot had wind machines. Only a couple of times did they get actual winds blowing in the desert.

"Miles away, you saw storms in the middle of the morning with the wind coming off the sand dunes—just beautiful. And in another scene, the sky was almost black. Incredible."

He sank back with the majesty of David Lean's desert scenes reflected in his beaming smile. Steven was very hooked on Lean's sweeping sandstorms; it was Spielberg country—that sort of scale.

Howard Kazanjian said to a passing English crew member, finishing a bottle of soft drink, "Hey, when you've finished with that I'd like it, I can put my penny collection in it."

"It'll cost you," said the cheeky Brit.

"Didn't it cost us already?" laughed Howard, hitting it right on the nose.

Most of us were to drink ten to fifteen pints of bottled water each day from then on. There were 200 of us so you can work that out. And that didn't include soft drinks.

"David," shouted Steven to David Tomblin, "fifteen minutes or we have to go on to the next shot. We'll be too late."

He was thinking very hard. "I really notice shadows more than anything else, even in something like *Lawrence*," he said. Howard said the shot would be ready in a half-hour. "Why?" said Steven. "That's too long."

"You know, it might be better to make the decision not

to do it, *now*," said George, "rather than wait half an hour and then find we can't do it."

Enter the optimist. "We'll be ten minutes," said Frank Marshall, still smiling.

"I tell you," declared Steven, addressing everyone who could hear him above the noise of shouting, wind machines, and generators, "I tell you, what my next movie is going to show is why and how it costs so much money to make a movie."

"And effort, human effort," said Howard.

Not to mention the camels, I thought, watching their keepers bind up one of their legs—that is, one leg per camel, to prevent their escape.

"Getting nearer," said Howard. "Cameras are ready."

It was one of those situations where everyone has to restrain himself. The people at the very center of the effort were doing all they could. One second's interference, even a question about how long, can be a gross intrusion. Yet one's instinct is to "help"—help like six hands trying to untie that final knot in the string around someone else's parcel just so we can all see the contents. Tough. But you do have to wait.

The minutes passed and the shadows shortened as the African sun climbed higher, higher. Kathy Kennedy said there were a lot of camels over the ridge. Were they in the way? No.

David Tomblin, rocklike, his ruddy face a mask of confidence hiding another layer of confidence, explained that orders would begin with him in English, in numbers, and would then get translated into French and Arabic by section leaders.

Patrick Cadell shouted, "Half have props, half don't."

"Doesn't matter," said David, "we're going to shoot. In a couple of minutes."

Steven cried: "Everyone step back, everyone back."

David now: "Kit, wind machine. Put it on now. Smoke now. Blow smoke." An enormous amount of smoke came from the first set of tires to be burned.

The wind machines were making such a din that no one could hear instructions. David told Patrick to use the walkie-talkie. "Will do," said Patrick.

"Dougie," David Tomblin shouted to Slocombe, cine-

matographer, "we'll turn anyway, let's get the ball rolling even if we have to throw the piece of film away."

"Steven," asked David, "do you want dust?"

"Yes," said Steven. "Before every shot check with me because we don't have the wind machines placed in the right spot. Here we go."

"What about the kids on the hill?" asked Frank Marshall, pointing at a group of tiny creatures swarming on the ridge.

"They're okay," said Steven. "Kathy! Now *you're* in the shot."

"Let's turn over," said David. "Here we go. Get the trucks out of there. Okay, action."

A "German" shouted "*Raus*" ("out," in English) and "*raus*" from the tent stumbled John Rhys-Davies, bullied and buffeted by the Germans in traditional Nazi style, and Steven got his take. It was, as Frank had said, ten minutes or just a little longer.

"Cut!" the director shouted.

After a few more takes, we had the shot. Actually *Steven* had the shot. The "we" indicates the oneness of life out there.

At lunch I began to talk in rather more depth with Ronald Lacey. Karen Allen and Ron were not needed that afternoon so the three of us talked for a couple of hours; when I returned to the location up the hill from the "restaurant" (a very cool and practical arrangement made of woven straw), I found I had missed a very unhappy, almost tragic, scramble.

David Wisniewitz filled me in: "It began when the six hundred extras started asking urgently for water. They were very, very thirsty. You know how we had been drinking water from those ice-cold bottles all morning. Well, they had had nothing." The other extras, he said, Europeans and the town Tunisians, who pass for Europeans, had had plenty too, but the Arabs dressed as Arabs, the *extra* extras, had had nothing at all.

"A fire truck was brought, and when the water started to come up there was much more going on the ground than they were able to drink; literally twice as much was being spilled. They were screaming and fighting for it."

David, with the passion of a human being but with the

pragmatism of a cameraman, said: "We got great shots for the documentary, I should tell you that, but it was a real bad scene.

"And strange too, because the educated Arabs around didn't seem concerned. Steven was real angry. The water was almost too hot to touch anyway, out of a fire truck that had been out all day in that heat. Steven said he doesn't care who they are or how they have been treated before, they are going to get proper food and drink. You know they treat the horses better than they treat the people out here on this location. Even the goats are better off."

Just then our afternoon break arrived, a very English affair with tea and coffee urns on trestle tables, cakes, sandwiches, biscuits, cookies. All most welcome. And most ironic, one felt: to them that have it shall be added unto . . .

As we had tea I studied the "German" extras. Many were Europeans, all sorts of vacationers signed on in various places and brought here, paid twenty dinars a day, with food and drink thrown in. I asked one of them how he had been hired. He said it was in Tunis where he was on vacation. His name was Victor Mallet, twentyish, British, and interested in filmmaking. "Most of us are in the same boat, students on holiday. European-looking Tunisians, basically French; and the rest are English, or German, Western Europeans. We met people who said we might get hired and here we are; we pay for our own hotels and I am in a particularly nasty one in Tozeur. But cheap."

He was a former boarding school boy and now an undergraduate at Oxford. He came from Wittisham, near Rye, in Kent. A little village a very, very long distance from this way of life, either multimillion-dollar movie-making or desert tribes. With his colleagues, he looked (short-haired and in Nazi battle dress, Wehrmacht brown) very like one of the young men of the Afrika Korps of forty years earlier.

Filming that day switched back and forth between Spielberg and Lucas. Steven seemed to have the energy of a madman and George had the time of his recent life on the second camera. Though there were fewer usable results that day than would have been expected from studio filming, it was generally agreed that the day was a very great success.

There had been some problems that caused delays. For example, the 600 Arab extras had not *seen* a movie in their lives, let alone been *in* one.

No wonder they kept laughing and pointing into the cameras. To us, that might seem simple, naive. But there *we* were, out of our environment, if not our element, running around with loudspeaking machines, talking to each other through strange electrical boxes we carried on our waists, dressing people up to be what they were not, shouting in curious tongues, drinking fifteen pints of water, and wheeling around huge cameras into which people mugged and grimaced and smiled as if demented—and we wondered at them laughing and pointing at *us*.

The number of setups scheduled that day was considerable. It had been a remarkable achievement to get anything, but the cameras had been all over the place using all available light. So we had had the opportunity of seeing many of Norman Reynolds' majestic designs really working.

As dusk approached, and the "predawn" switch shot was prepared, we were all relieved to see the end in view —except possibly Steven, for whom every second of light was precious.

Monday, the first and least easy day in the desert, was finally through, bar the showering.

Desert Days

"It's not for sissies out there."
—Maggie Jones, Continuity, Second Camera Unit

As we have learned, Monday was a rough, wild, and wonderful day but nobody should have expected otherwise. Thank God it was over.

By comparison, Tuesday was a breeze. Already the pace had slackened to a gallop and I felt able to take a couple of hours to sit comfortably in the meal tent after lunch, beating at the flies with my tweed cap and shouting, above the air conditioning, to Ronnie Lacey.

We agreed that we were lucky to be working on such a friendly old-fashioned action picture. Both of us were just the right age to appreciate the privilege of being involved with the great battle of lean handsome hero and raven-haired heroine fighting cruel Nazis in North Africa. Ronnie himself had given a severe verbal caning to an acquaintance who, early in the shooting, had not shared his bubbling boyish exultation at working with Lucas, Spielberg, and so many other bright young people in this jolly prank of a B-movie.

That evening, much prodded by Maggie Jones of continuity on second-camera unit ("*Not* second unit," she would admonish those who so referred to it, "we are second-*camera* unit; the action unit." Mickey [Moore's] team),

I decided to make Wednesday a day of action, having basked in inaction much of Tuesday.

"It's not for sissies out there," said Maggie. "We don't have any of the mod cons and luxuries of the first unit."

Well, I wasn't a sissy, no sir, and, not having noticed the first unit to be especially favored, I didn't think I had much to lose by heading out next day to the coarser, dustier terrain of the car chases. There, stunt men with butch names—Vic, Chuck, Rocky, Bill, Glenn—fought cruel elements, violent machines, and bruising speed with salaries, minds, and bodies unlike normal people.

I had heard the food was "interesting" on second-camera unit: Tunisian in the morning and afternoon breaks, British-made at lunchtime. Fifty thousand flies can't be wrong, the joke went around. Our food on the main unit was made by Britons for the British palate, but most Americans and assorted multinational extras found it equally pleasing. It certainly was healthy and fresh and familiar—but those flies! Steven Spielberg took no chances: he brought all his own food from Britain in cans: canned spaghetti, canned beans, canned meat, canned fruit, canned macaroni and cheese. Junk food it may have been, but it was fly- and foreign-finger-proof. It was, after all, fairly important Steven not get sick. In fact he never did; not once.

On Wednesday I hit the road to the second-camera unit with David Wisniewitz; Phil Schuman was sick. After quite a drive we arrived at a group of people who were certainly unadorned by first-unit paraphernalia. No caravans, few umbrellas, and not many of those people who make a location feel more human: wardrobe, makeup, family, friends. No: this was strictly action and support/supply systems. This was the front line.

David was not slow to leave. Mickey Moore said the best scenes would not be for a day or two, so David headed back to Tozeur to check on Phil's health.

It was a wise decision. There was, as in war, not a lot happening that you could write home about. Not much that would make a story on its own. So much of what we see or hear or photograph or write doesn't really mean a lot unless one is actually taking part. So it was that afternoon. The scream of brakes came infrequently from toughened vehicles carefully made in England to survive the dangers of the chase and to protect their drivers and pas-

sengers from the unexpected. Even in the arranged field of stunts, there is an X-factor where things happen. I mused on these and other things with Magdalene Gaffney, who was working this unit as makeup person.

Not long into the morning I began to hallucinate. I had a terrible headache and a sensation of falling upward. My hair was on fire, my eyes were blazing. I reached for my tweed cap. Too late maybe? Was this death, then? If so, it was as bad as they said it was.

I stumbled to the source of the bottled water. Magdalene helped me to pour it and gave me cotton wool and eau de cologne. I sponged my forehead and neck and cursed my madness in the midday sun. By and by the desert came into focus and under an umbrella I recovered sufficiently to talk some more to anyone who wanted to listen and to listen to anyone who wanted to talk. As it was getting hotter and dustier neither of these categories was large in number.

Eventually the bus arrived to take us back to Tozeur, if we lived there, and beyond that to Nefta, if we lived at that smarter address. The aura of the addresses was dependent on the standard and location of the hotels. Tozeur boasted the shabby Grand Hotel. Nefta, sniffily, had a huge edge, with the Sahara Palace Hotel rising gaudily and expensively, incongruous and profitable, among the poverty of the real town. In any event both Tozeur and Nefta were wonderful flukes: water in the desert. Oases. How romantic the sound of that word and how terrific the reality.

On the bus I had two seats to myself, one for my inordinately heavy bag of tapes and equipment for playback and one for my increasingly separate body. My mind took two steps and looked down on the spectacle of desert fever. There was a brown cast to everything. Was there green anywhere on earth? Had there ever been?

What heaven, said my body, to be in a cushioned seat with a back support. What madness to be here at all, said my mind.

The stunt men one by one climbed wearily to their seats, fit as their curious vocation insisted they should be: American, Italian, British, Irish, some chewing gum, one chewing tobacco, balanced crazy men, average age thirty-eight, average attitude extraordinary, exemplary.

I eavesdropped on a dry description of the Tunisians

from a very English English voice. "They stay very close to the French sphere of influence. Bourguiba runs the show. He is very crafty and a blinding double for Max Wall (a British vaudevillian)."

This was Bill Weston, who described himself to me later as "probably the luckiest man on earth. I get paid a fortune for doing nothing. When I do work, it is sheer joy. And as I don't regard it as work, I can't see that my salary can be for *that*, but rather for the times when I am sitting around, for the periods of boredom. I live the life of a multimillionaire, traveling everywhere, doing all manner of exciting dangerous things. We all do, the stunt men. And for that mean side of one's nature, that nasty killer part of one, well, they say, 'Get in that car and kill him,' and one sort of does."

Now, on the bus to Tozeur, we fell silent, real fatigue and the effects of sun and sand seeping into all sorts of bits of each of us. We watched the sun set very quickly and then I was in Tozeur and off the bus while the rest of the men sped off to Nefta. I walked through the soukhs feeling pleased with an afternoon away from what Maggie had quite rightly called the "luxury of the first unit," but ready for a horizontal view of life. I hadn't been alone for some days, not in the town—such is the price of not driving one's own vehicle—and I dawdled among the crowds doing absolutely nothing, crowds sitting in the street, on the sidewalks, on the steps of the shops and stalls. They were too full of day-is-done to induce me to buy; a nice time to take one's time.

Several of the smaller shops, kiosks almost, where one bought stamps, bore the sign "Tabac." Tabac—tobacco—here was an unblemished pleasure. There was no thought here of side effects. Tabac was a treat, a necessity, a blessing, a sort of pre-1950s leisure activity. Cancer, bronchitis, heart disease? Who are you kidding? Tabac = happiness. It was enough to encourage a man to take up smoking again, to see the unrelieved bliss of these men smoking out here in the evening. I shuddered the thought away but, by the time I arrived at the hotel, I was wanting a cigarette very badly after four years of pompous abstinence.

The hotel was smelling very ripe; I began to feel quite vapid walking past the swimming pool, with its warring scents of chemicals and heaven-alone-knows-what-else, and

up the open stairs with their unrivaled view of the stalls in the men's urinals from which two fellows waved cheerfully with their free hands. What a place this was! The Grand Hotel de L'Oasis is high on my list of favorite watering holes. I dare say it will be spoiled soon. It seemed ripe for "improvement."

Better a bad smell than the replacement of this simple building by a Holiday Inn or worse. As it is, you have to be tolerant and patient. Few tourists stayed long while we were there. Many passed through quickly, late at night or early in the morning. At about ten o'clock it seemed there were hundreds of them shouting and spending and imbibing; mostly French, sometimes Germans.

Already North Africa is falling fast to the worst depredations of foreign capital: condos, big hotels, the hideous automobile. Already there were too many cars in Tozeur but there was not yet a traffic jam. There was still room and the right attitude for mule carts piled with grasses and God knows what other staples. Now and then goats and sheep and camels would come up the street past the hotel.

So I thought as I washed the sand from my hair in the not-quite-cold water that came from the hot tap that night and every night.

A diary would read: "Washed hair, did laundry, had dinner, went to bed." In the dry heat you could wash a pair of jeans in the evening, wring them dry by hand, put them out overnight and have them ready to wear next day.

That Wednesday night, after an unwise dinner featuring a great many tomatoes, I went to bed early and slept badly.

Thursday seemed to dawn too early and too hot, but that was just my own view of it. It was that way every day and always had been in the Maghreb since the ocean became a desert. It was no use any of us lot arriving for a gnat's-wing of history and complaining. The real trouble was that I wasn't well.

I stood to face the day and check my laundry on the veranda—the daily miracle—and knew that I had problems. My eyes seemed to have merged as one great throbbing theater of pain and my frown slashed down the middle like a sword to intensify the anguish. My legs, never much support even in times of rude health, were shuddering and my bowels had melted to lava.

So I dressed in bright colors and went to breakfast, de-

termined it was temporary. Jack Dearlove was down there, dressed as if for tennis, but actually under doctor's orders to stay in the oasis and *not* to go to the desert. He seemed to be in similar condition to me, only more used to it. He was in, I think, his second day.

Breakfast was dry enough, rather solid French bread torn into pieces, butter, jam, and coffee that took ages to arrive. The previous evening David Wisniewitz had ordered coffee and the waiter had said: "*Café. Oui.* Tomorrow. Yes." David had said that would be fine, but coffee *now* would be good too. "*Aujourd'hui.*" The waiter had smiled and the coffee had come . . . tomorrow, which was today.

I was becoming fond of the waiters' moods: they were like weather on a river. Always interesting, never the same, sometimes sunny, sometimes dark, a great adventure. Today the waiter was placid, seeming to know that some of the Anglo-Saxons were feeling too frail to be troublesome.

David drove us to the digs. Phil was too ill to move anything but his left eyelid. I pitied him for his feebleness. Here I was, well past twenty-five years of age, from temperate East Britain, fighting the might of the cruel Sahara, while he, young, attuned to heat by California living, lay abed like an animal in despair, his moral fiber left someplace with his schoolbooks. Little did *I* know that within a very few hours I was to meet Hannibal's Revenge head-on.

In the desert I quickly settled to leisure, seeking shelter and comfort. There seemed to be a terrifying amount of work going on. There always is on busy locations and it is only when one is below par that it seems frightening. Tarak Ben Ammar, the Tunisian production coordinator described in *Variety* as the "31-year-old forward-looking private cinema entrepreneur who has been responsible for Tunisia's strides as host country to foreign film producers since 1975," was certainly looking as if he earned that description as he sat. Hollywood casual, discussing money with producer Frank Marshall.

Tarak became a familiar figure in the days that followed. I was interested in the distance he kept between himself and fellow Arabs for much of the time he was in the desert. Armenian, Jew, Catholic, or WASP—it didn't matter. If someone looked as if he had a few dinars in the bank you would find Tarak hanging in there talking Polo

Lounge talk. But I never saw him passing the time of day with the shepherds or extras. Once, at the prime of day when the heat was really very bad, I saw the lowly Arab "diggers" looking fit to faint waiting for the fire truck that brought them their water twice daily. Tarak was sitting alone under an umbrella, barefoot, smoothing his jeans. He took a bottle of iced water and let it trickle slowly over his left foot and then his ankle and then he repeated the action with his right foot. So on until he was nicely cool and the bottle almost empty. He drank the remainder.

Well, who am I to criticize? I was under my own umbrella, fully watered. Privileged.

Interesting that the Arab extras earned ten dinars a day (about $2.38 to the dinar) on a movie costing something like $10,000 an hour. Yet as everyone kept insisting, and I cannot quarrel with the argument, they were glad to have the loot. In any case, as *Variety* stated: "In most parts of the world, crowd scenes have become a luxury. In Tunisia background atmosphere is available in conspicuous numbers and at a cost adaptable to any budget."

The morning passed in a blur of remote activity in which I could play no part. At lunchtime, sitting under an umbrella that was quite near the Well of the Souls exterior, I played some early-twentieth-century classical pieces, Delius, Satie, stuff like that, through my headset, trying to make myself loose to face the onset of an early demise. I was, I believed, dying.

One of the great pleasures of working within a union framework was the reliability of the timetable. Left to themselves, entrepreneurs will go without food and sleep and short-term rewards (like salary, expenses, vacations); and often they desire that others, for whom the long-term satisfaction may not be so lasting or fulfilling, join them in their sacrifices.

Unions have made sure that there are limitations on such enthusiasms. They certainly make sure that in England, at least, everything stops for tea; and if you are working with an English crew, everything stops for tea in the desert: twice a day.

And so with lunchtime. Never mind that it would make sense to go on filming. It is lunchtime, the lunch is ready down the hill and that is that. And so if one feels ready

to die—as I did—then at lunchtime one will die alone for, assuredly, everyone else will be eating.

Alone, under the umbrella, having told everyone I would be quite all right, I wondered at the patience of the camels, standing on three legs with the fourth tied back until required by Steven to perform some colorful bit. My clothes were becoming tighter at every pressure point, head, neck, waist, ankles, feet. I loosened everything and sat slumped, like a lout, in Harrison's canvas chair waiting for the unwelcome return of other members of the human race with their conversations and responses. In the event, they were very kind and within three or four minutes I was away down the hill and through the desert, speeding by car to the hotel, with a promise that the doctor was following.

(David said later that anyone so careful in the matter of dress who had opened his trousers in the middle of the Sahara was clearly a sick man and that, in fact, had been the decider. "Better get him indoors before he goes completely ape.")

Some hours later, I awakened in very cold white sheets in my hotel room and answered the telephone. It was Dr. Felicity Hodder to say she would come to visit me. She herself was run ragged. Dispensing hangover cures to those crew members who swung from branch to branch nightly at the Continental Hotel was a full-time job without well-behaved people like me falling prey to local malaises. She arrived with pills and advice and told me I was going to live but that Phil was still bad. I wondered if it could have been the ice he put into his Coca-Cola. Ice cubes were not made from bottled water. It was best to remember that.

Soon after Dr. Hodder left, David arrived back from location: filming was over, it had been great, I had missed one of the finest moments of the entire movie, and he was bringing me some visitors. A mixed bag of news.

David arrived with publicist Kirsten Wing, photographer Nancy Moran, and Karen Allen, sisters of mercy. I was an uncomplaining and brave patient and assured them that if they went down to the poolside and waited a while I would appear, like Lazarus, to hear the gossip from the digs.

David and Karen shared the telling of the story of what they called the greatest moment since the film began. A German youth had been hired for a small part—a German

supposed to execute Indiana Jones' Egyptian friend Sallah, played by John Rhys-Davies. The curious and wonderful alchemy of the drama sometimes places together two actors who can work miracles. There in the desert this German student, who had come to Tunisia for a vacation and no more than that, found himself playing an intensely moving and emotional scene with a man who had been learning technique for nearly twenty years.

In the rushes I saw a week later the results were beyond description. The moral dilemma of a young soldier forced to decide whether or not to kill a harmless stranger—this is the business of foreign wars, and this unknown German boy had been able to convey it as well as any actor I had ever watched. But Steven said the bitter truth was that brilliant and memorable though the scene was, it would probably end up on the cutting-room floor. It was just too long.

In any event, my missing what became known as "that scene with the German soldier" hurt me so much that I resolved to get better. I was now assured within myself that I had a commitment to *Raiders of the Lost Ark* stronger than I had supposed possible when I first read the script, long ago in June.

Conversation Pieces Under the Sun

"If I were really to let go on a movie, with exceptionally violent realism, I would probably be put away for gross bad taste."

—Steven Spielberg, Director

Friday and still two days to go to the end of the working week. On location Saturday is business as usual, and Sunday the only day of rest. The rumor mill was busy with a story that we might be away from the desert a week earlier than planned.

David and I drove to the desert and changed roles. I became well and he became ill. Phil was now recovering. However, the stars of our show were falling prey.

"What's new?" I asked Nancy Moran, who had been a reporter with the *Washington Post* before falling for a Leica.

"Steven is sitting on the tarmac under his Flying Wing saying he wants to go home. I think it's because the airplane isn't working. He says it's 120 degrees inside his head.

"Everyone's sick. George is looking more like Howard Hughes every day. He will be arriving with his feet in Kleenex boxes soon. You can't miss him. He's over there." She pointed to a group consulting near the camera. "He's the one with red ears. He is terribly sunburned."

Harrison, said Nancy, was ill. Likewise Karen. "She has

had to be taken off the set back to her dressing room-trailer." Nancy asked me how I was and what I had been doing. I was very well and had been enjoying the desert again, after the previous day's abrupt departure.

I walked across the baking sand to talk to George, who was due to fly away next day in Tarak's private plane on the way back to Los Angeles.

What fun had it been? Had he had a happy week?

"I don't know whether work is ever happy," he said discouragingly. "Work is hard. It has been a hard week. I'm always busy. I work seven days a week. Twelve hours a day on the average. Feel very good when I can get a day off once in a while."

I asked about the break in Hawaii when he and Steven had first talked about *Raiders of the Lost Ark* on the beach at the Mauna Kea Hotel.

"I had been working for three years without a break and I really didn't want to be around Los Angeles when *Star Wars* came out. I had a good break then."

Activity around the camera crew was intensifying and George walked off to participate. The Flying Wing was central to the day's action and though there were "technical problems" there were many setups to be accomplished. Producer Frank Marshall was playing a German pilot and looking extremely happy to be protected from his duties as executive by the duties of an actor. I don't know which would be worse.

I put my tape recorder over my shoulder and wandered around the location. I spoke to Dickie Mills, the makeup supervisor on location. He said he was enjoying himself but wasn't getting as much tennis as he would like. Though no longer a boy, he had youthful instincts and was said to be a good hand at tennis. He was building a house in Austria and wanted to be there as soon as possible. Being in the Sahara is a means to that end, I supposed aloud and he said I was supposing correctly. "I would not mind at all if I never saw the Sahara again," he said. I for my part could not bear to believe that I would not see the desert anymore. I had fallen for that brown brownness with an unpredictable and uncontrollable passion.

I wandered on and met second assistant director Patrick Cadell, who walked with me to a group waiting for something to happen. He talked of a dusk shot. "We need one

up there at the Well of the Souls. We tried to get it yesterday but didn't. There is to be some coverage with Germans at the top of the Well and tight shots of Harrison, but we still need to have all the actors there all the time."

Actors, the great stoics of filmmaking. Never on overtime, so often out of work, they are horribly familiar with the line, "They also serve who only stand and wait." Patrick understands this. He is, more than anyone I ever met, steeped in the theater. His grandmother was Jean Cadell, a great British stage actress. "My whole family is from the theater. My mother is head of a drama school, the Guildhall. My twin sister and brother, my uncle, both grandfathers—all actors. Donald Sinden, Peggy Ashcroft, godparents. Oh, and Ralph Richardson." But Patrick preferred film to theater.

He had left boarding school and England to work for eighteen months in a copper mine in British Columbia as an alternative to going to a university. He also worked for a well-known television cook in Britain for seven months.

What sort of a man was made a second assistant director with the power of life and death over 500,000 flies in Africa and similar numbers of mosquitoes in Hawaii? Patrick, a quiet, modest man, smiled and said: "Patient." This quality he shared with all of the senior crew.

In a while I found myself sitting under the umbrellas. There was a large group of us. Looking along the group from left to right we had Ron Lacey listening to one of my tapes through a headset. Next to him publicist Derek Robbins, Steven Spielberg, and Pat Roach. Pat was a wrestler from Birmingham, England, who had a gymnasium nicely done up in Victorian restoration, he said. Pat was playing a couple of heavies in *Raiders:* a Mongolian giant in Nepal, and a German bully out here. A useful man to have around. I have seen him wrestling in England, on television on Saturday afternoons.

Harrison Ford was sitting on Pat's right. Dickie Mills was painting Harrison's lips with "blood." By the Flying Wing was another "Indiana Jones," writhing on the tarmac. Harrison said it was Vic Armstrong, a double for whom he had particular admiration. That was saying something because there were some good ones: Glenn Randall, American stunt arranger, doing horseback work; Martin Grace in the Well of the Souls and the South American

temple; Terry Leonard out there in the harder desert in the car chases. All Indianas.

A passerby asked Harrison, "Is this your first film since *Star Wars?*" The answer came out haltingly. "Er, no . . . not really," and then died away and the questioner moved out of earshot.

Harrison said he had a problem with that question. "It's one of the most difficult to handle artfully," he said. "You are working like a professional, you know, and feeling like a professional, and then, 'Have you done anything before *Star Wars*, or since? . . .' Well, you don't want to set down a list of your motion pictures." I said he should wave airily and say: "Oh, I've made a very great many pictures, dozens, hundreds."

"You can't say that," said Harrison, laughing because it was quite true that he had made a great many, only there was no way of saying it gracefully.

There was, nearby, the sound of a machine gun.

It was Steven Spielberg talking. "We are, according to sketches, halfway through the sequence." He was referring to the Flying Wing.

George was close by and responded: "Good. Great. Able to finish this tomorrow?"

Steven said he would be able to finish the sequence in which Marion was rescued from the burning plane, and George asked: "At sunset are you going to get them getting out of the truck?"

Steven: "You and me."

George expressed mock surprise. "Me?"

"This is the last day I've got you here, George. I need your support. I need your moral support, immoral support."

"We're practically done," George said. "When this is over we'll get into handball, basketball, swimming. Able to live in San Francisco and go to L.A. as little as possible. Two-hour lunches. Hanging out. Great if we can do it."

Steven said: "Next shot I'll push the camera closer up and get the bodies blowing up."

George looked at him quizzically: "You told me you were only having two troops in this."

Steven questioned him: "Two troops, what do you mean 'troops'?"

George said, "You told me you were only going to have a couple of troops run out."

Steven counted, "One, two, three, four, five, six, seven . . . ten guys. That's a couple."

George: "That's a dozen."

Steven replied quickly: "George, I'm making a really big movie here."

George agreed. "All right," he said. "But Steven, there's a difference between a simple murder and a cult massacre."

Steven came back: "George. We're coming in on schedule, and close to budget. I just want to kill a few Germans."

"Oh, all right," George laughed. "You can kill a few Germans."

Steven was not through with him. "What I mean is, I don't want to kill *Germans*. I want to kill Nazis. I *like* Germans! They're nice people."

George was chastened. "Okay."

"Thank you, George," said Steven.

Pat asked George about the next Indiana Jones movie. "Any plans?"

George said: "It depends on what mood Harrison's in." Harrison's mind was then on scripts. He was receiving a lot of them, not all of them great literary work.

George went on to discuss the shortage of scripts of merit, filmable, bankable scripts. "The studios have the same problems. So do directors who don't write. There are limitations. Most of the best material is bought up by the top directors. It's best if directors write their own material."

Steven had stepped away from the group to film a violent sequence near the Flying Wing. Unusually, but, in all the circumstances of a movie on such a scale, understandably, David Tomblin had been in the shot. Shock. Horror. "Grunt, groan," said Steven, chairman of the Tomblin fan club despite this.

Steven mused on violence, for there did seem to be a lot of it in the film, though in this case, "cleaned-up" violence. "If I were really to let go on a movie," he said, "with exceptionally violent realism, I would probably be put away for gross bad taste. The best real fistfights are so totally unrehearsed and undisciplined and ungraceful that it just makes you sick watching them.

"Movie fights have set a standard over fifty years: a

fight is a punch, a cross, a block, a counterpunch. One of the most realistic fights in the world was in a movie called *The Chase* in which Brando was ganged up on by three businessmen. They beat the living daylights out of him. It was just like several of the fights I saw in high school and college. They are not pretty to look at and that is why nobody shoots them."

George said it would make people vomit. Both agreed it would not sell any popcorn.

Steven added: "And really it does fall into the category of bad taste, doesn't it? A lot of realistic things do, you know . . . art imitating life. I had Slim Pickens sitting on the john in *1941*."

"I know," said George laconically.

Steven made a whistling sound with his mouth pursed.

"You're a bad-taste director," said George. "But I hired you anyway." Steven laughed. George looked around and commented, aside: "He isn't all bad taste." Steven laughed again.

Friday was a very good day and the mood lasted overnight into Saturday. At lunch on Saturday Karen mentioned the German extra who had so astounded the location yesterday. Steven said: "I don't think he wants to be an actor. Anyway, I think George will cut the scene out. He said he wants this film to be cut like *Star Wars* and *Empire*. But I have final cut and beyond that, I think that George sees that this movie really *isn't Star Wars*, isn't *Empire*. This movie is about characters."

"He does," Harrison agreed.

"We gotta have those emotional moments," Steven said and sniffed. "I smell cheese."

Indeed he did. It was, as Ron Lacey observed, "old clothes-hamper cheese," and it was very nice, though, as a Londoner might say, "going a bit."

Karen, sitting between Steven and myself, said she had eaten some a day earlier and had not been able to get the smell of it off her hand all day. I continued to eat it, though less unself-consciously than before. All noses were on me.

"Please don't mind me," I said, "Carry on sniffing among yourselves."

Karen said: "Paul looks so healthy today," changing the subject.

Paul Freeman, most beautiful man in the desert, said that he was far from healthy and felt awful. "I have a terrible hangover," he confessed from behind a pale bronze mask of makeup and sun.

"It doesn't show," laughed Karen.

"I can barely speak," Paul said. "I make my own head hurt when I speak. I think there's something odd about this heat. When I'm drinking, I am not drinking much, but *oh!*"

There was a general assent to this. There *was* something odd about the desert heat. It was hot and not to be trifled with.

Steven Spielberg's girl friend Kathleen Carey had arrived in Nefta the previous evening. Karen asked what her impressions were of North Africa. It was too soon to say, said Steven; she would be on the set today to take a look around. She had cheered him greatly by her arrival: she hadn't traveled light but had brought with her jelly beans, letters from all his friends, new clothes, magazines.

"Did she bring any newspapers?" I asked, craving news of the Labour Party conference in Blackpool, England. No, said Steven, she didn't. Only *Rolling Stone*. Well, that would be rather old and tunneled news, I thought, and wondered at the huge emotional distance between life in such bare lands under such changeless skies and the fading, rained-on clutter of the British seaside town where the quarreling politicians were thrashing each other with old, broken promises. What if one were single and chose never to return?

We talked generally about things that happened when one was far from home and out of touch with day-to-day news except that which most closely concerned one's close family and friends. Harrison said it seemed inevitable that people one knew had died if one was away for a few months. "Get back from being away, look at the pile of mail and say, Okay, who's dead?"

Steven began to talk about casting a movie, with serious advice to those looking for work in the motion-picture industry. "When you're meeting twenty-five people daily, all the people who come in between three and seven o'clock shouldn't bother. We totally phase out by then. Come between nine and lunchtime; we're hot, anxious to cast the movie, eager."

Karen asked when she had come. "In the morning, in New York," Steven rapped out without hesitation. "Nobody measured up after that. 'Not as a good as Karen,' we kept saying." To Ron Lacey he said: "You came at 4:30 and you looked nothing like the character, but you had a photograph with you of a play you'd done and you looked like a cross between Vincent Price and Peter Lorre. That was what I wanted. The picture did it."

Paul Freeman, said Steven, was cast because he looked like the character and Steven had seen him in *Death of a Princess*, in which he had played the reporter/producer Anthony Thomas. But, said Steven, repeating the advice, never come in the afternoon. On that note we split up and went up the hill to the Tanis digs, full of conversation and good humor. Ron Lacey concluded that the moral of the lunch hour was that whereas a human being was unwelcome at certain times of day, a photograph could arrive at any hour and work wonders.

Harrison Ford Speaks Up

"There are only two ways of casting: it's either casting by type or casting against type."

—Harrison Ford

As the days passed I became very friendly with Harrison Ford, and as a result I didn't always switch on the tape recorder when we spoke. It seemed inappropriate. Now and again, however . . . words, thoughts, ideas, even whole sentences were captured forever. At one such time it appeared appropriate to ask how Harrison had started on *Raiders*, his fourth film on which George Lucas has served as director or producer or executive producer.

"Well, George called me and said he would like me to do Steven Spielberg's next film if Steven and I got along. I had met Steven once, casually. And George told me right away that there would be three of these films, but only if the first film was successful.

"I was convinced enough of the talent of the people involved to believe that the first one was going to be a good film. That is the most important thing. And one of the circumstances we haven't really spoken about is that I hadn't been able to find a project I liked in the three months before I started this.

"I've had two days off since we started and we're on about our fiftieth day of filming. So it's been tough that

way; but I've been having a good time working with Steven and the interplay of ideas has been exciting."

He said he looked at a character in a film in terms of how he had to behave. "I more or less create a character out of the physical circumstances that I find myself in, the people that I'm working with. Indiana Jones is a person about my age, of about my abilities and capacities. But he lives in a different time and a different place."

"Do you identify with this character?" I said.

"I don't know. My mind doesn't organize itself in that way, really. I think of acting more as a practical kind of exercise. I never thought about identifying myself with a character or not."

"How is it working with Steven Spielberg?"

"I've had a real good time, very enjoyable, because Steven has a lot of energy and enthusiasm and he's a very facile filmmaker, seems born to the job. I feel a sense of collaboration with him, which I like; and I think we get along well together, which is very helpful. Also it's nice if you respect a person's work and I do respect the work he's doing on the film a lot."

"Do you have much freedom to develop the character?"

"A lot of times it has to do with the script, whether there's an opportunity for creating layers of the character. This script is certainly a very good framework. You really don't have to create character, you just have to create behavior that defines character. And in that a director and actor work together."

Harrison was pleased with the rewritten version of certain scenes that were tightened, although, like other principals on *Raiders*, he greatly admired the substance and form of the original script. It had stood up remarkably well to the unfolding realities of the day-to-day shooting.

"We did the rewriting in most cases to cut the part. Circumstances come up where something has to be clarified or there is another point that we want to make or Steven wants to emphasize something."

He went on, "It's inevitable that there'll be some rewriting and I like what we've done with the script. I'm altogether extremely pleased with what I've seen—for one of the first times on a film I'm watching dailies every day so I know what we are doing and I am very happy with it."

The conversation turned to typecasting. Because of his manner and bearing, it is fair to say he and Dirk Bogarde are not fighting over the same parts. Harrison agreed that he was somewhat typed as a high-action player, but he had had the opportunity to do parts outside that area—comedy and so on.

"When I read the script for *Raiders*," he said, "I told them, 'Sure, love to.' Although it's an action character much in the way that Han Solo (of *Star Wars/Empire* for Rip Van Winkles and people doing solitary confinement) is an action character, Indy is a different type of personality from Han—a different person interested in different things.

"I've had the opportunity *because* of the first *Star Wars* film to do a lot of other kinds of roles. Anyway, I'm not too worried about the typecasting thing. It seems people are always cast by type anyway. There are only two ways of casting: it's either casting by type or casting against type; so it doesn't really mean that much."

Looked at from where I stood, the part of Indy seemed to be a paradox. In some ways it gave Harrison quite a lot of license. He was dressed simply in rough clothes, with minimal makeup, and in that respect much of the acting was natural. On the other hand, severe demands were imposed on his body because of the old-fashioned daring of the part. And because Harrison is rarely off the screen, he had little rest. Sometimes the mountain ahead must have looked long and wearisome and full of bruising. Actors and actresses work *very* hard.

So when he said he was enjoying himself, he usually added, "When I'm not too sore, I enjoy it. You get a lot of bumps doing movie magic—even with stunt men taking their shares, a bump here and a bump there add up to a bruised and battered body."

As to stunts, he said that the more he did on camera, the more convincing the character. One of Harrison's major stunt men, Martin Grace, said that Harrison was very athletic and capable of doing a great deal. "With guidance, he can do a lot. A little instruction on the detail and he's there."

Harrison added, "It's true, you can do a lot of stuff yourself. And I'm glad to if the stunt is coordinated so that there is an advantage for the film in my doing it myself. I don't want to do it for the glory. But sometimes I

begin to feel more like a football player, a *battered* football player, than a movie actor."

His makeup took, he said, fifteen minutes a day. When he arrived in England he had "the California look of health," as he put it, so he started the part with a tan. Now that his tan had dimmed, he had to have the color matched daily by makeup. He also had a slight beard and short hair to be maintained at the same length.

"No attempt to make me even more beautiful than I am naturally," he said.

Harrison and his girl friend, Melissa Mathison, missed their home in Beverly Hills a great deal. They had not been living there long and had just remodeled it before they left for *Raiders*.

"I got back home after four months on *Empire* and found that the entire house, which has hardwood floors, had just had its first coat of stain the day before. The floors were actually still wet when I came in.

"The work on the house was supposed to have been a two-month job and I was on *Empire* four months and it still wasn't finished. So we lived in the basement for weeks and I'd get up every morning to work on the house until we finally got into it. Didn't get in the house for about a month after I got back. But that was a good re-entry into reality. I didn't mind at all."

I asked about Harrison's carpentry background. "My first job was on a $100,000 recording studio for Sergio Mendes' backyard in Encino. It was literally the first job of construction that I ever had. I was up on the roof working from a book from the Encino public library. Sergio would wander out when he got out of bed, wearing a robe and smoking a big cigar, to see how it was going.

"That job went well and word-of-mouth was good, so I went on working for well-off people, people in the entertainment industry mostly. I did have some interesting work. I did an addition to a Frank Lloyd Wright house and a Lodner house—interesting jobs. I was well pleased with that period of time."

Spielberg said of Harrison, "He never does a scene or plays a moment without feeling justification for that moment, even if it's just getting into the truck and punching

George Lucas confers with Steven Spielberg on location in La Rochelle, France. *All photos not credited are courtesy Albert Clarke.*

Associate producer Robert Watts and producer Frank Marshall discuss film logistics on location in La Rochelle, France.

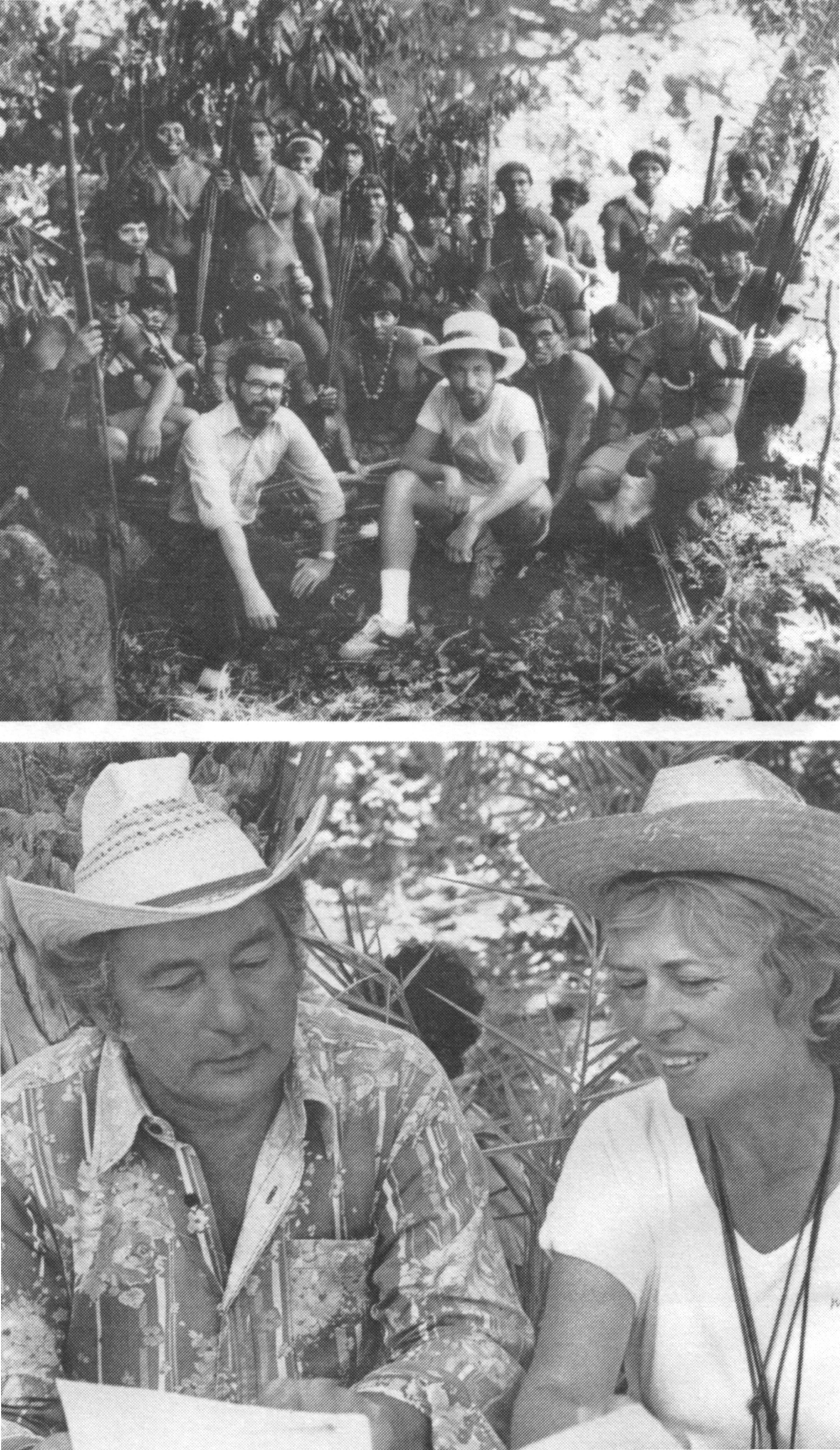
Steven Spielberg rehearses, as seen with Harrison Ford, Bill Hootkins, Denholm Elliott, and Don Fellows.

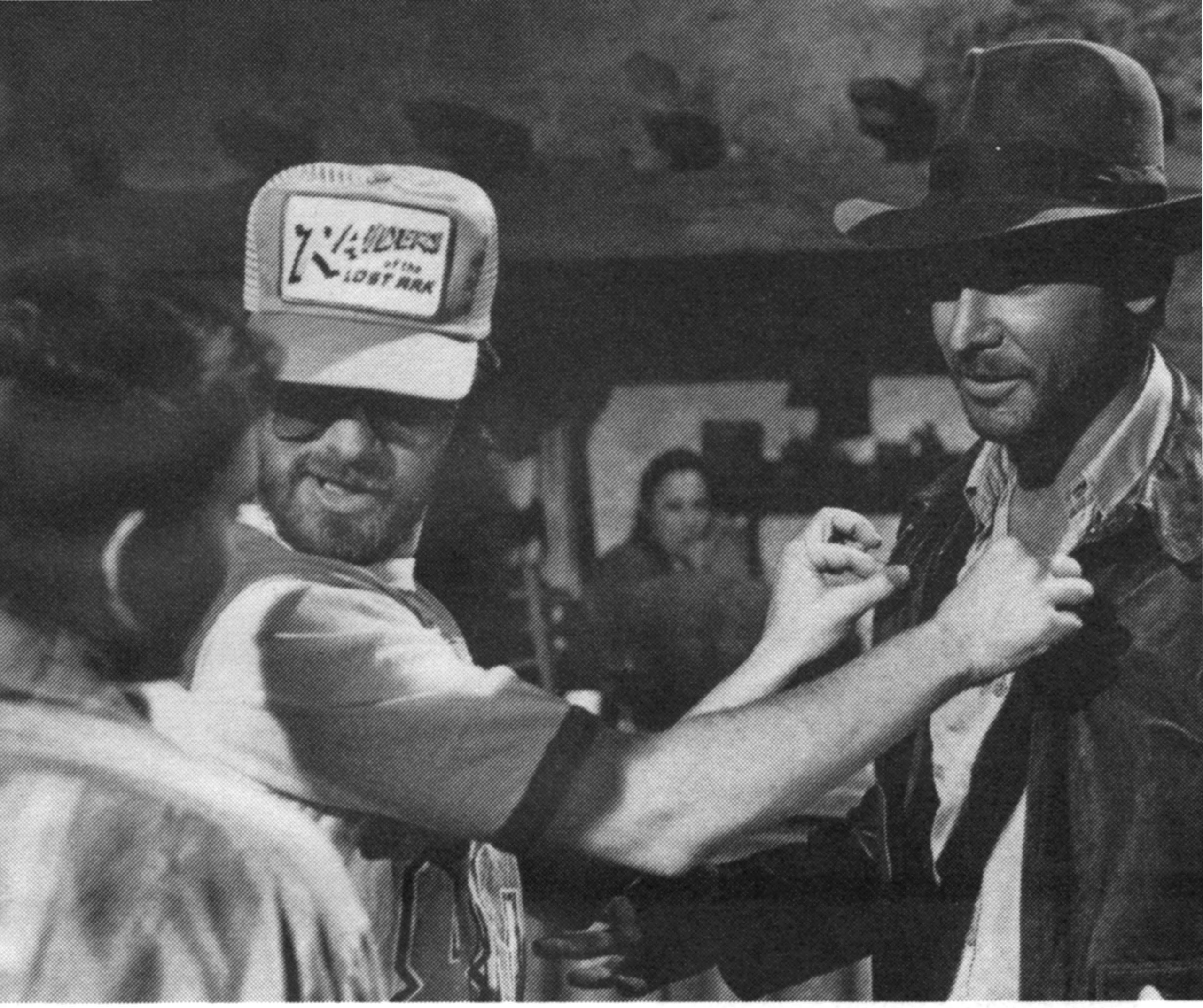
Steven Spielberg shows Harrison Ford the reaction he wants
when Harrison discovers a skeleton impaled on spikes
in the Chamber of Light.

Harrison Ford watches as Douglas Slocombe, Steven Spielberg,
art director Leslie Dilley, and crew set up a shot of the
Idol of the Chachapoyan Warriors.



From left, Frank Marshall, Howard Kazanjian, George Lucas, Steven Spielberg, Douglas Slocombe, David Tomblin, and crew on location in Hawaii, which served as the setting for the South American scenes.



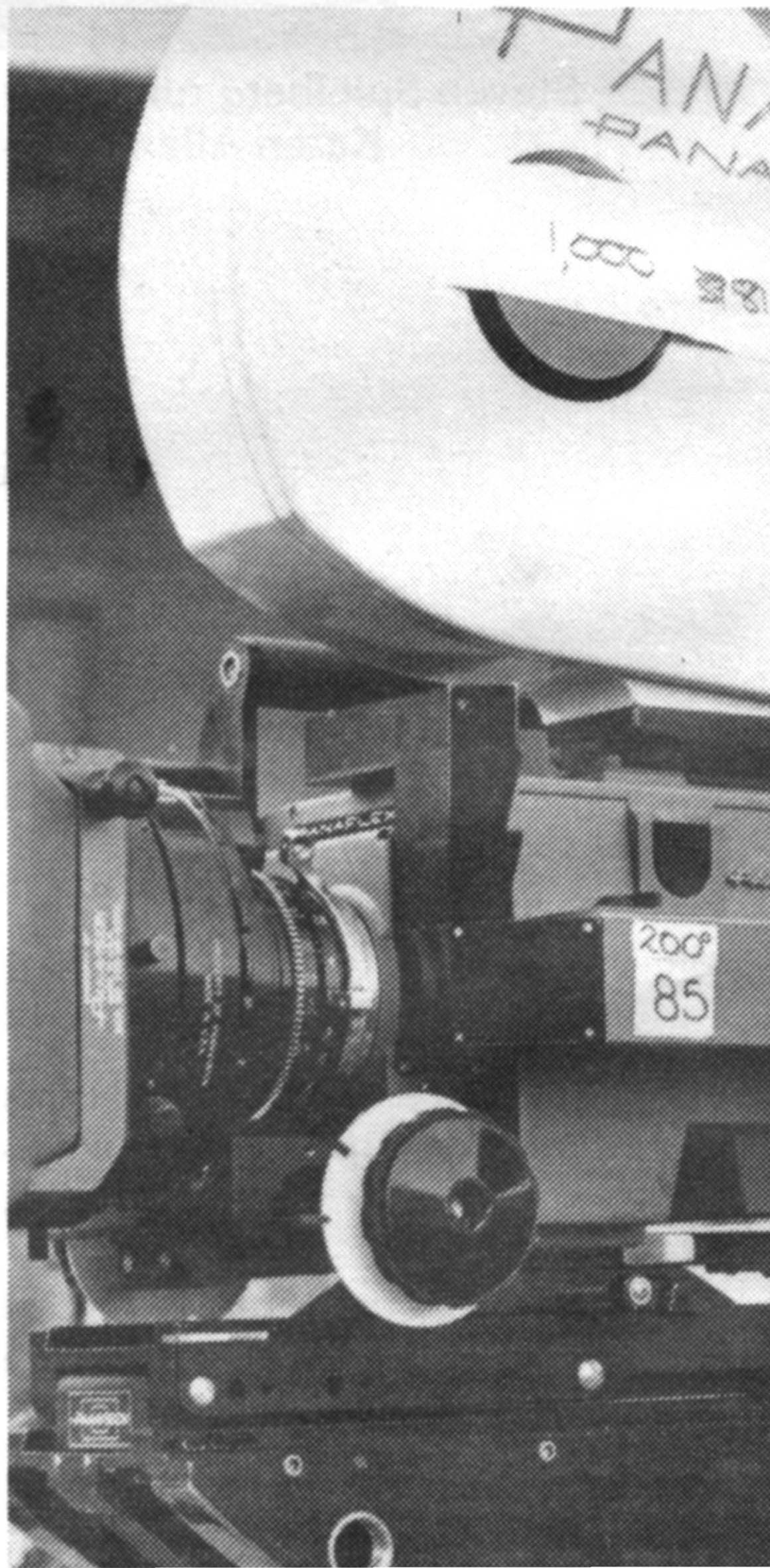


Steven Spielberg runs through a scene with Harrison Ford and Karen Allen on the set of the Raven Saloon.

Opposite, above: George Lucas and Steven Spielberg pose with the extras playing the fierce Hovitos Indians while on location in Hawaii. *Photo by John Shannon.*

Opposite, below: David Tomblin and Pamela Mann at work on location in Hawaii.

A miniature model of the snow-covered Raven Saloon was used in planning the Nepalese sequence.

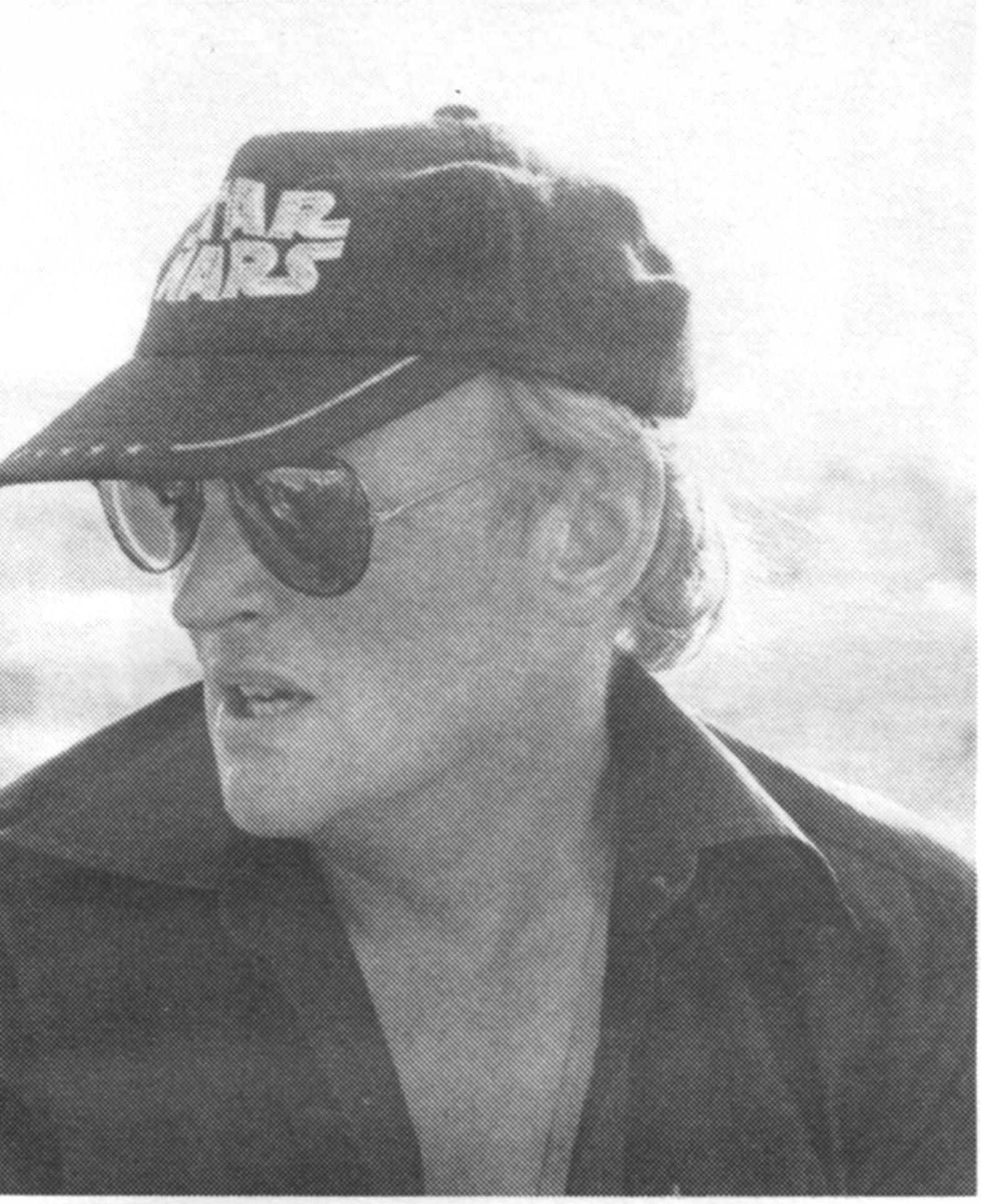


Opposite, above: Ron Lacey displays a remarkable make-up job—the imprint of the medallion on his "burned" hand.

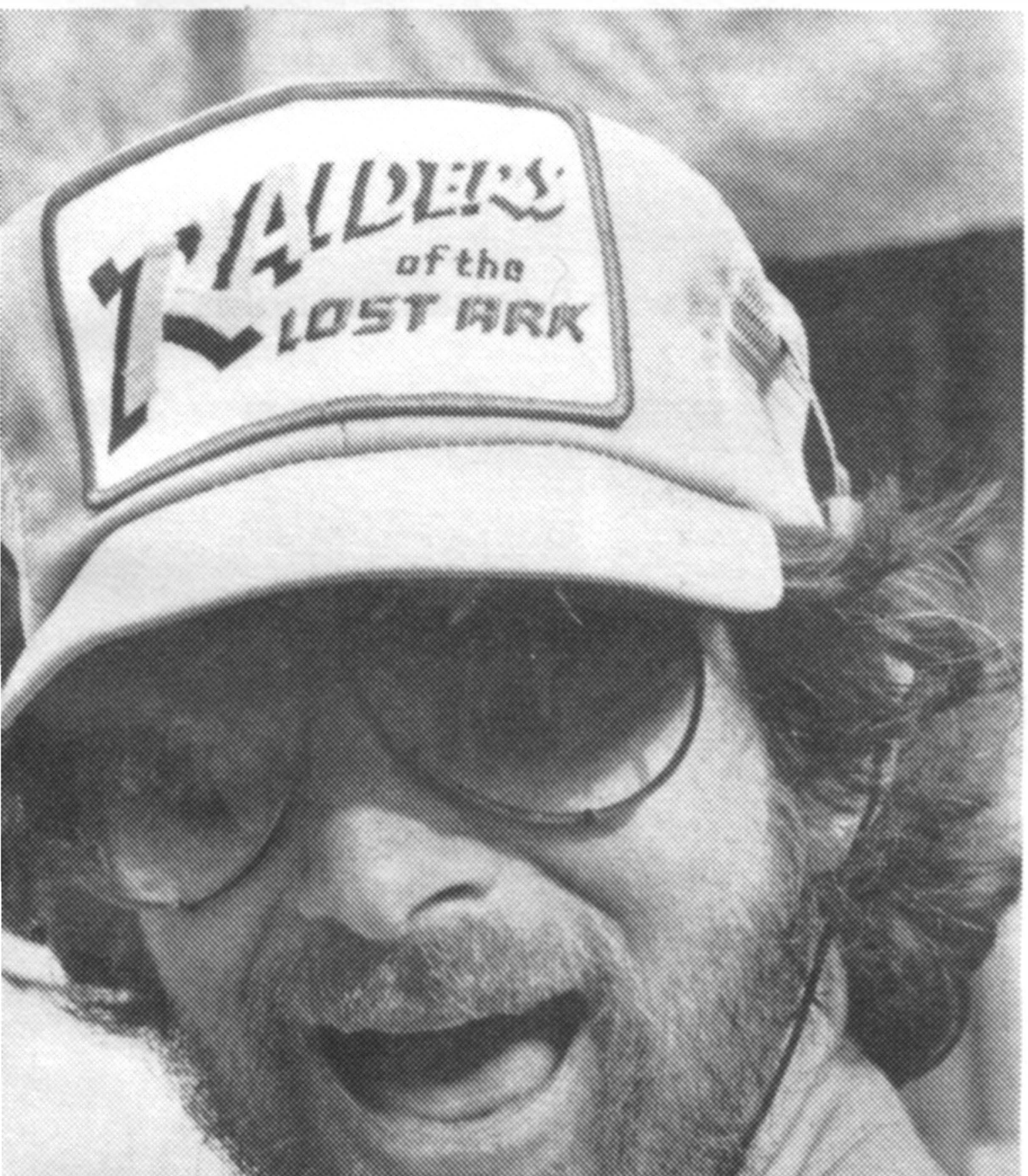
Douglas Slocombe and Steven Spielberg behind the camera.




VISION
FLEX



John Rhys-Davies and Robert Watts on the balcony of Sallah's house; behind is the city of Kairouan, from which about 350 TV antennas were removed.



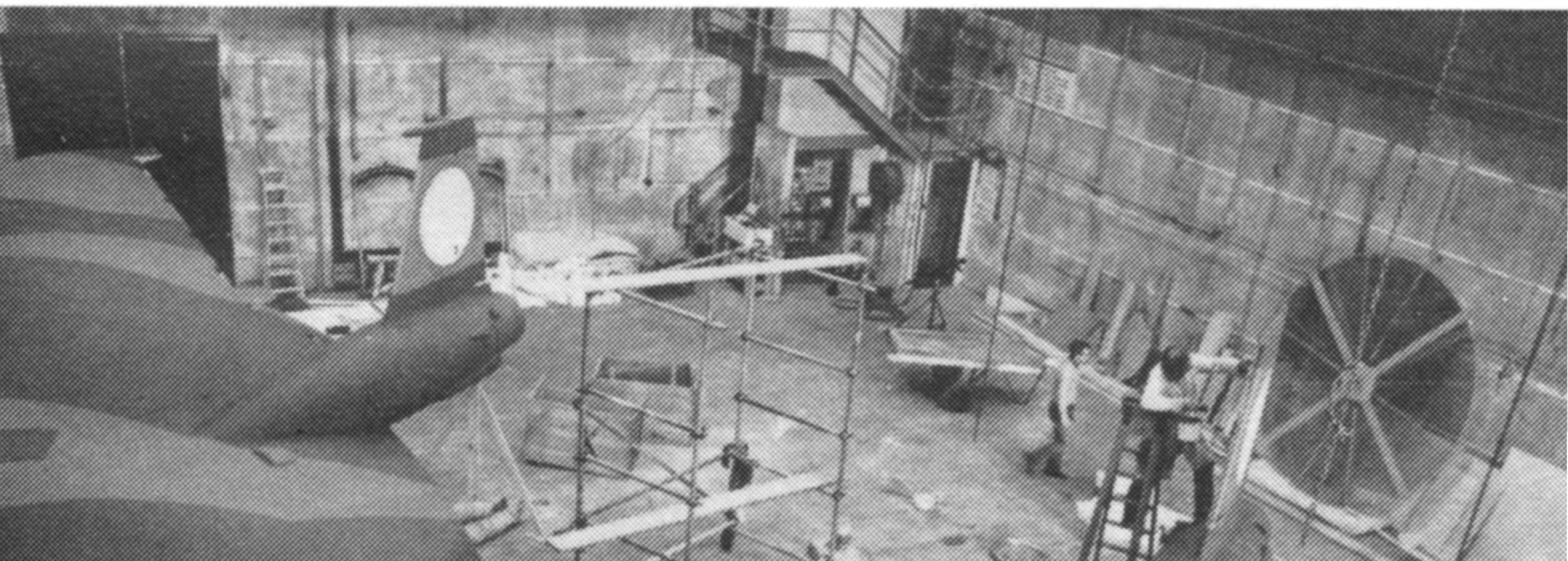
Steven Spielberg and Karen Allen take a break with monkey, Snuff.

Steven Spielberg rehearses a scene with John Rhys-Davies.

Construction manager Bill Welch confers with Norman Reynolds and Robert Watts.

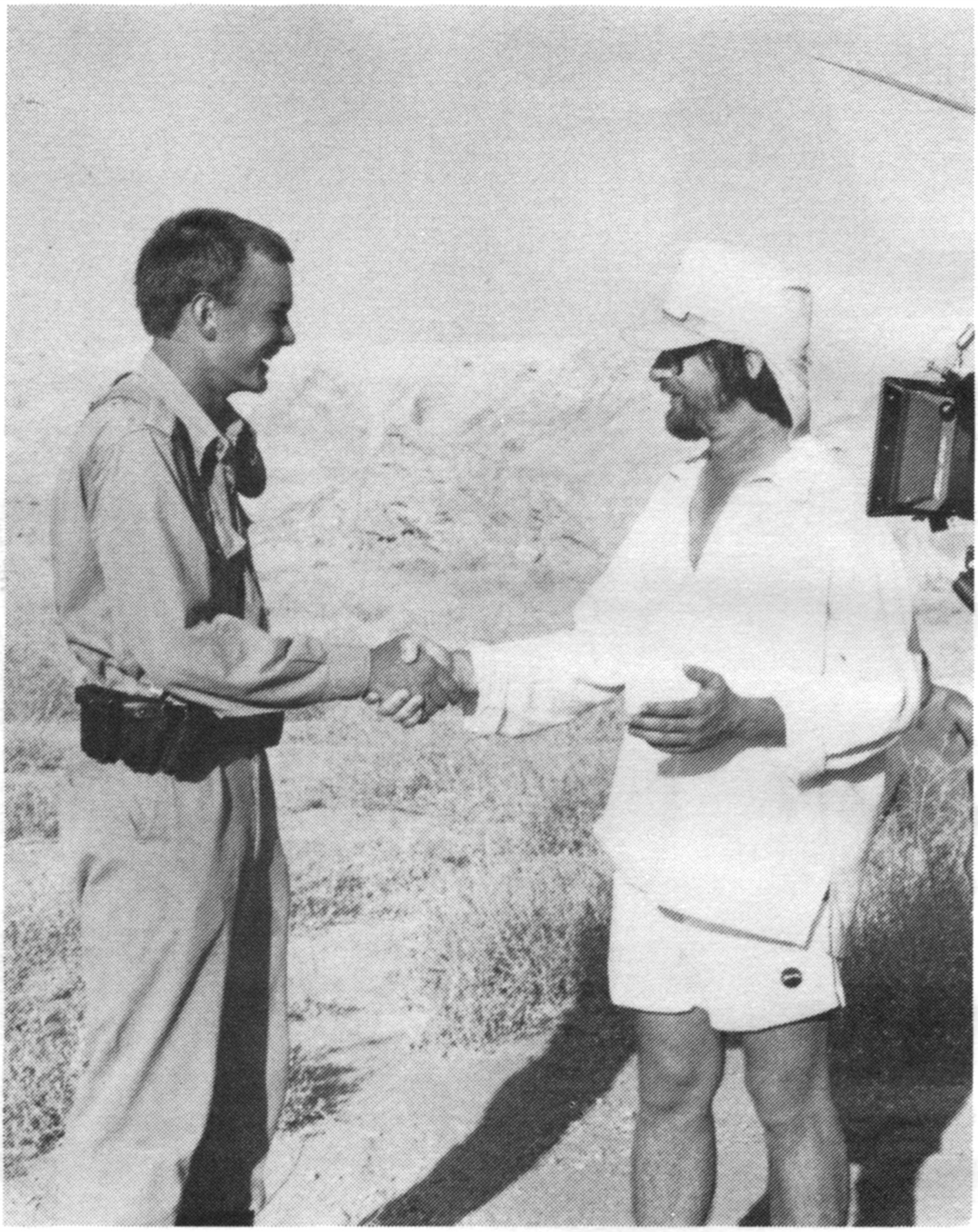
Steven Spielberg mimes for Karen Allen
the Cairo square fight-scene action.

The ominous Flying Wing under construction at EMI Elstree Studios;
once the plane was completed, it was disassembled and sent to
Tunisia for the actual filming.





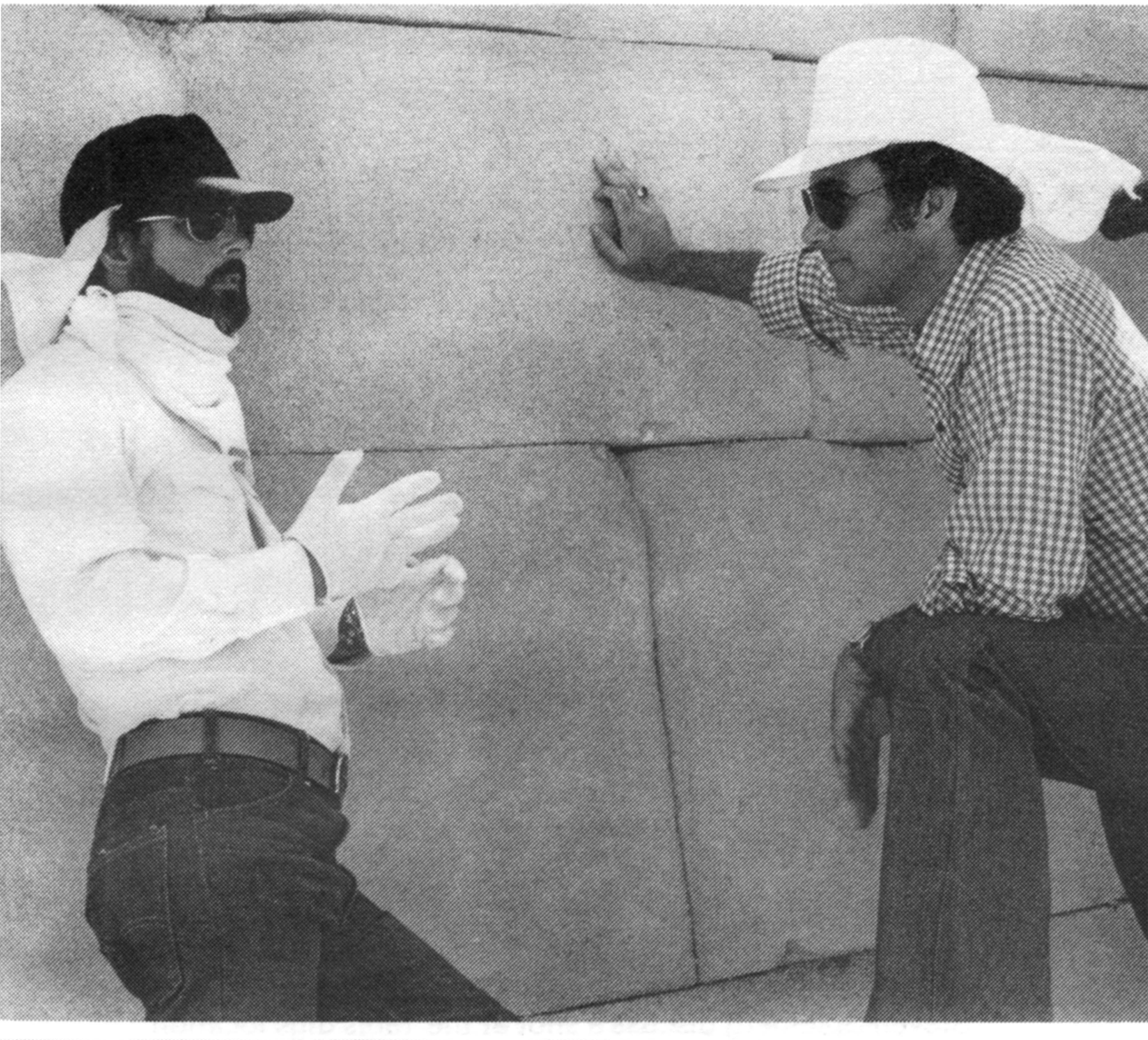
David Tomblin (at right) picks his way through the rubble of the Flying Wing explosion while the crew extinguishes the last fires.



Steven Spielberg congratulates the young German extra whose performance so impressed cast and crew.

Opposite, above: On location in Tunisia, George Lucas takes a break from editing (note his editing gloves) for a consultation with his co-executive producer, Howard Kazanjian.

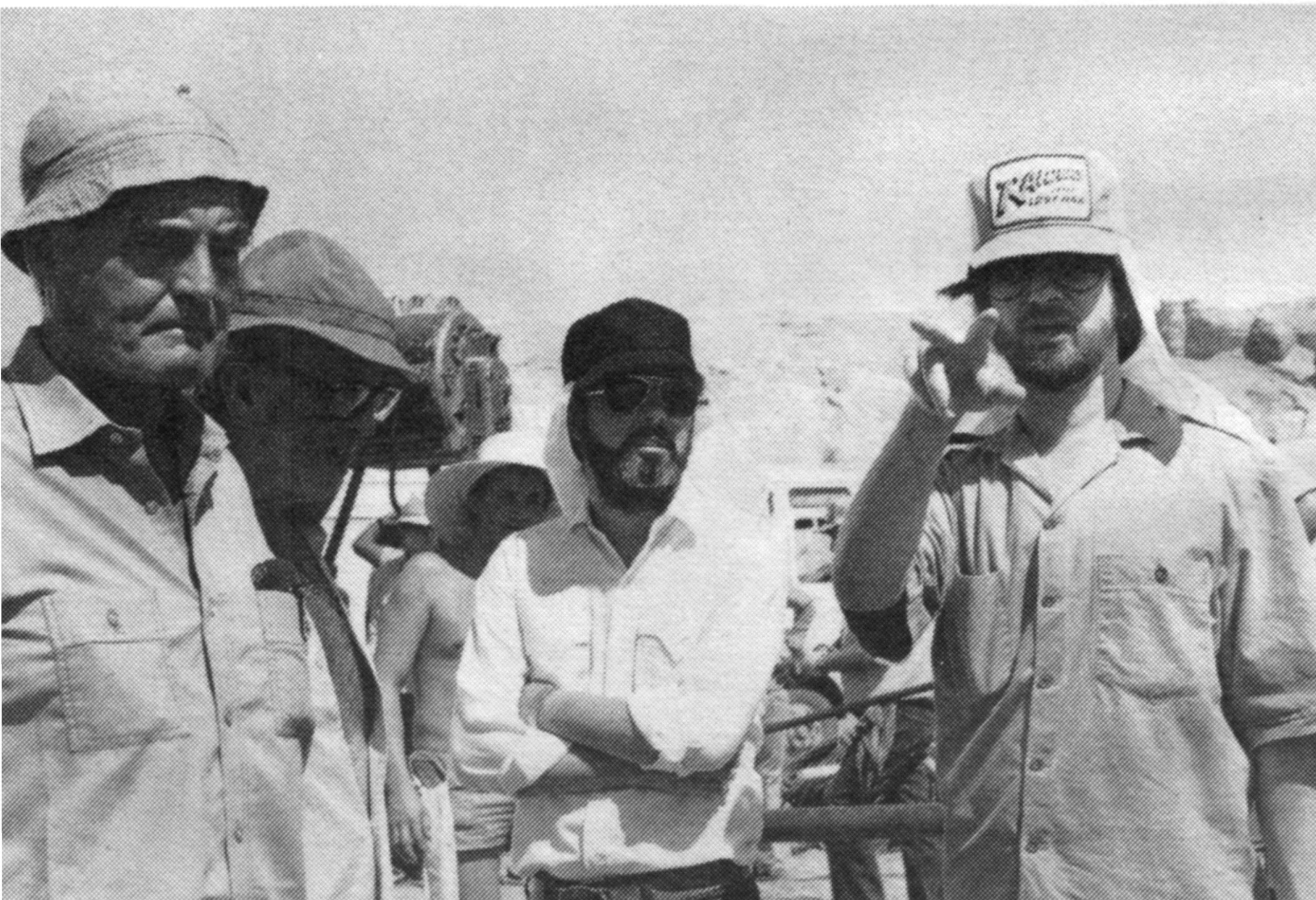
Opposite, below: Steven Spielberg, feet up on the camera, and Frank Marshall, dressed as the German pilot, relax before filming the Flying Wing fight scene.





This miniature of the Tanis digs was used to plan action for several scenes.

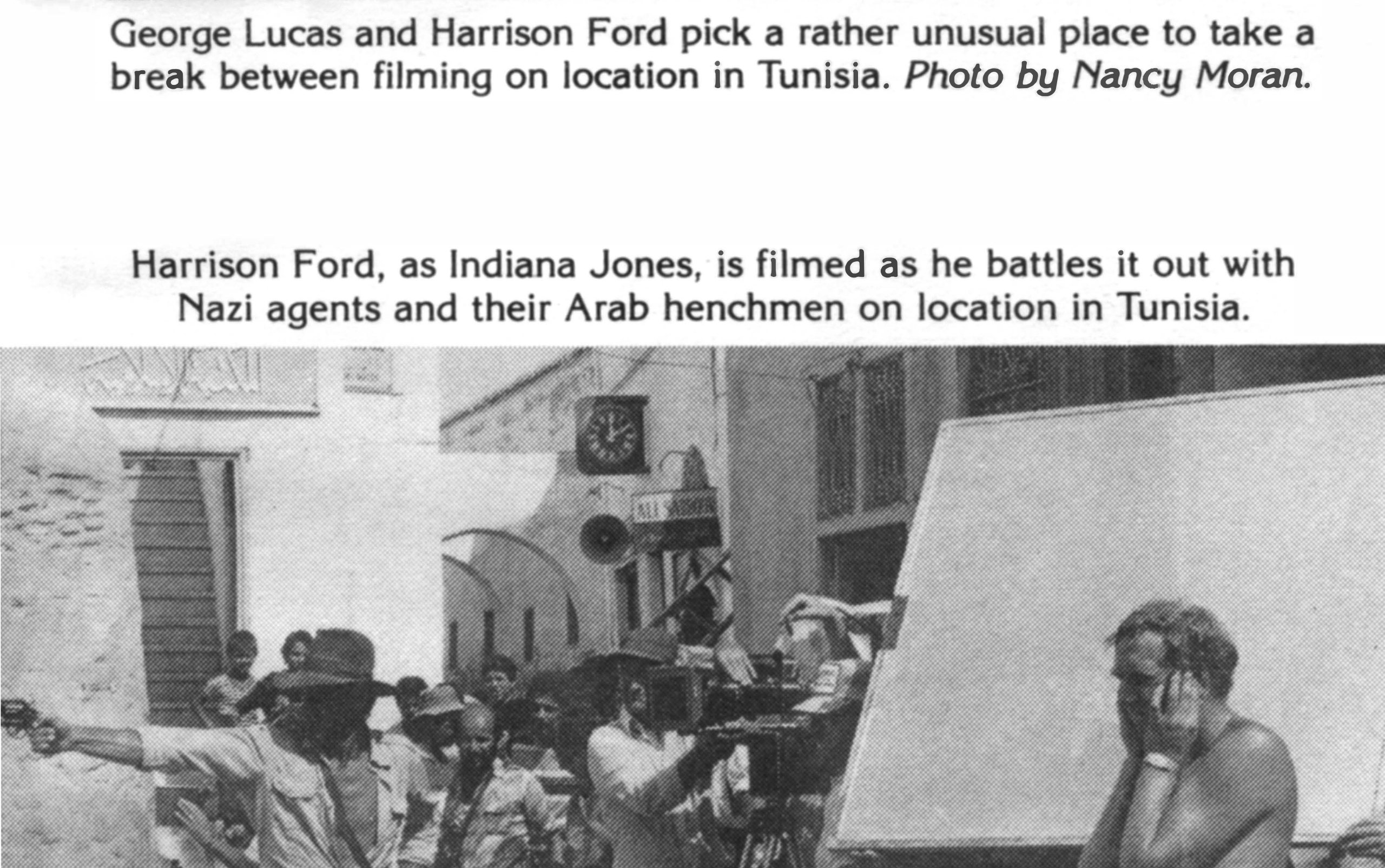
Chic Waterson, Douglas Slocombe, George Lucas, and Steven Spielberg discuss a shot at the Tanis digs location.





George Lucas and Harrison Ford pick a rather unusual place to take a break between filming on location in Tunisia. *Photo by Nancy Moran.*

Harrison Ford, as Indiana Jones, is filmed as he battles it out with Nazi agents and their Arab henchmen on location in Tunisia.






Knights
of the
LOST ARK



Howard Kazanjian, George Lucas, Harrison Ford, and Steven Spielberg at lunch in the location "dining room" in Tunisia.

Steven Spielberg and production designer Norman Reynolds on location in Tunisia.

The stuntmen in Tunisia. From left, standing, Paul Weston, Billy Horrigan, Rocky Taylor, Sergio Mioni; seated, Terry Leonard, Glenn Randall, Peter Diamond.

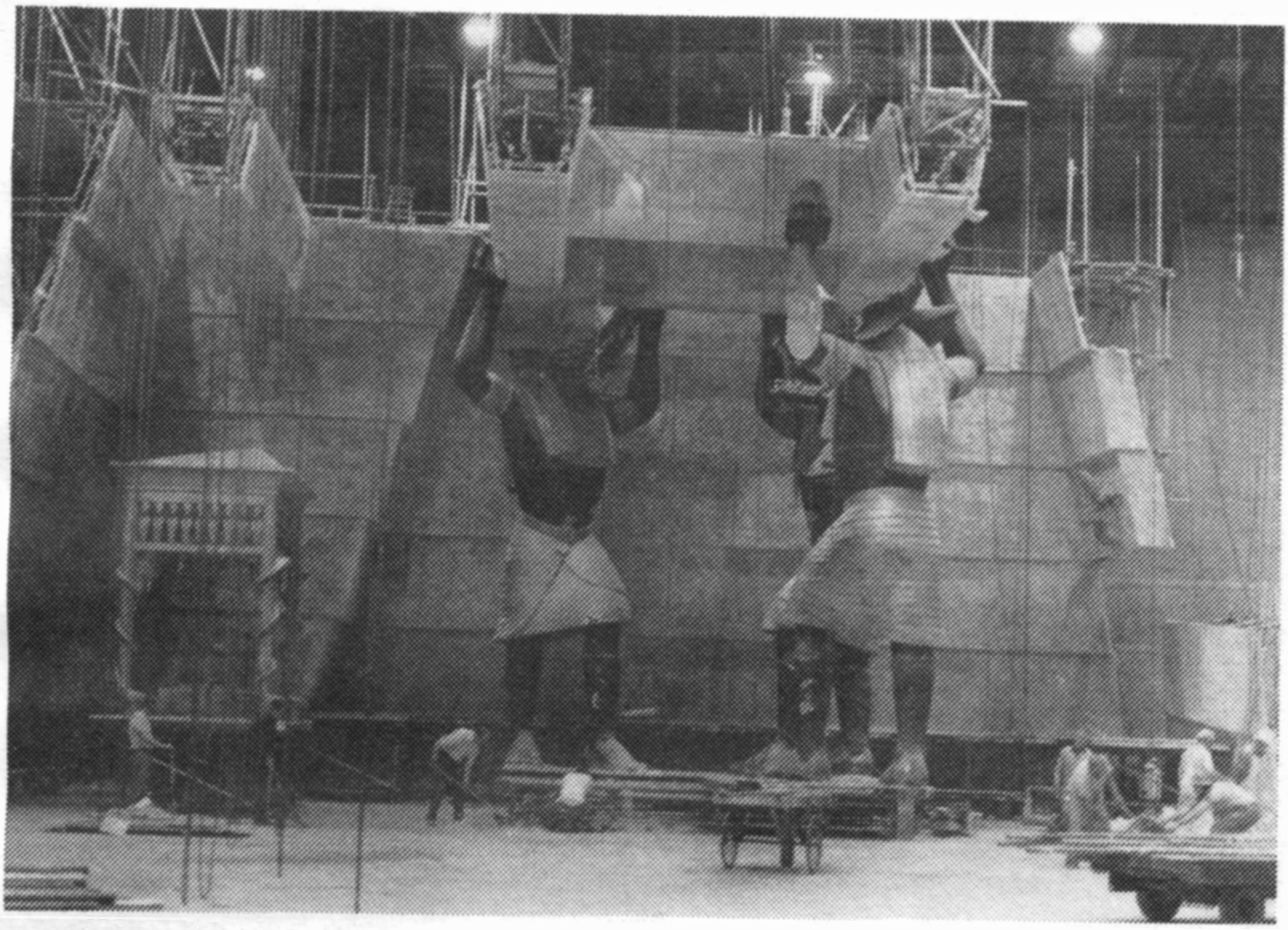
Harrison Ford, George Lucas, and Howard Kazanjian enjoy a respite from the sun on location in Tunisia.

Frank Marshall and crew prepare the snakes for close-up shots to be added to the scenes in the Well of the Souls.

Animal handler Jed Edge shows producer Frank Marshall a few things about working with the snakes. *Photo by Nancy Moran.*



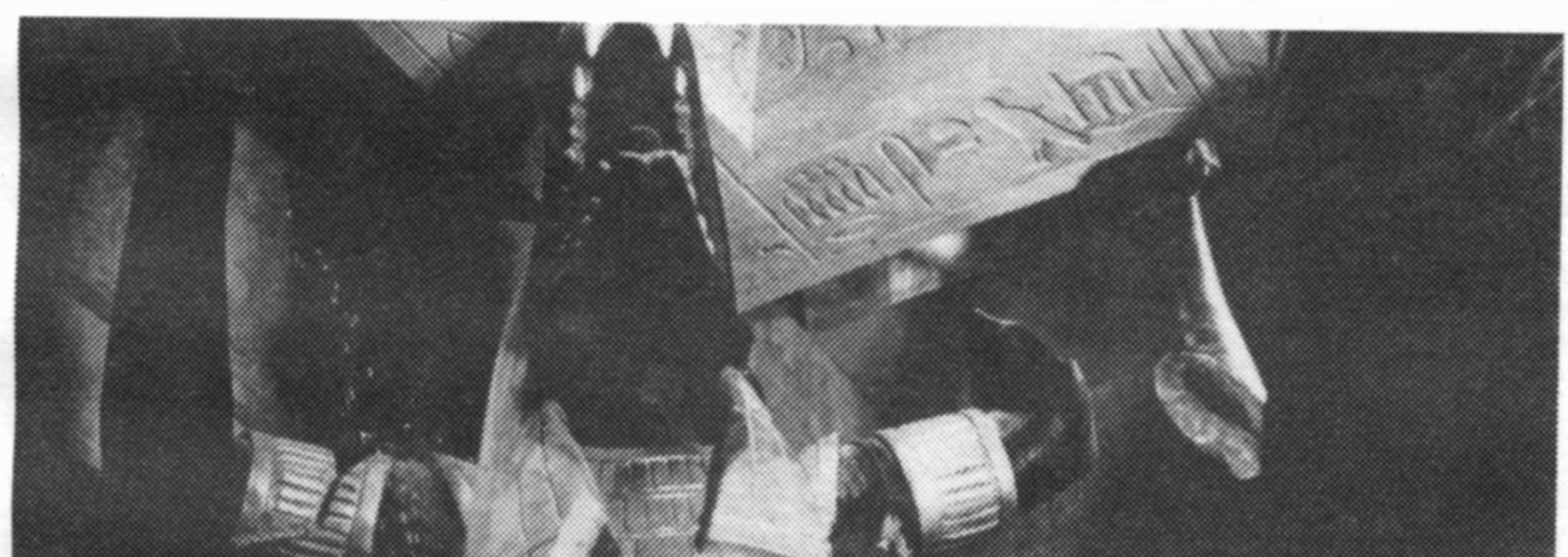




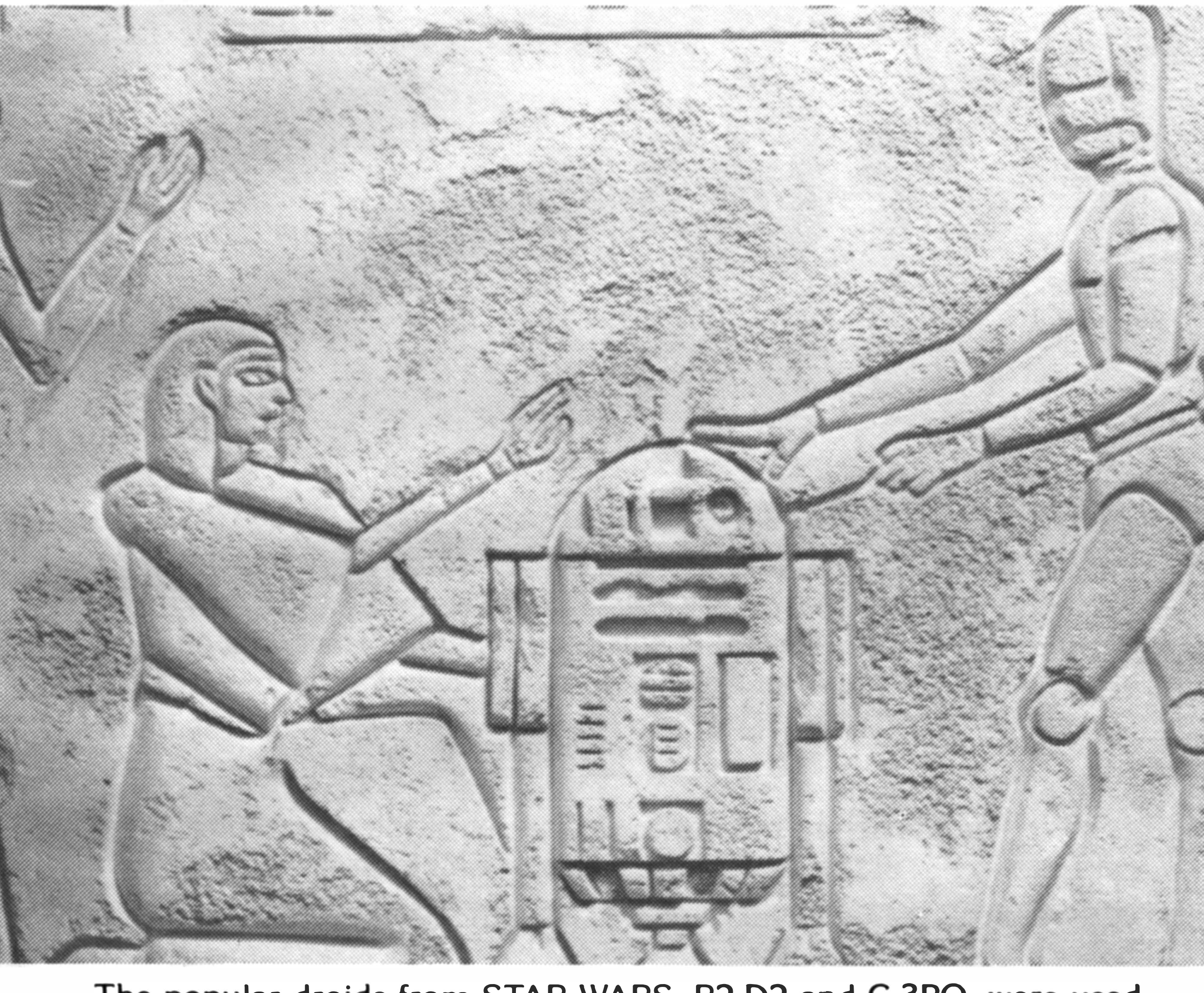
The impressive Well of the Souls set in construction at EMI Elstree—the jackal statues are over 35 feet tall.

Opposite: Snake handler Steve Edge shaved his legs in order to work as a stand-in for Karen Allen during some of the snake scenes in the Well of the Souls.

Stuntman Martin Grace has a precarious hold on the giant jackal statue in the Well of the Souls.







The popular droids from STAR WARS, R2-D2 and C-3PO, were used as part of the "ancient" hieroglyphics inscribed on the walls of the Well of the Souls.

Opposite: Karen Allen uses a skeleton's arm to relieve an itch on the set of the Well of the Souls. *Photo by Nancy Moran.*

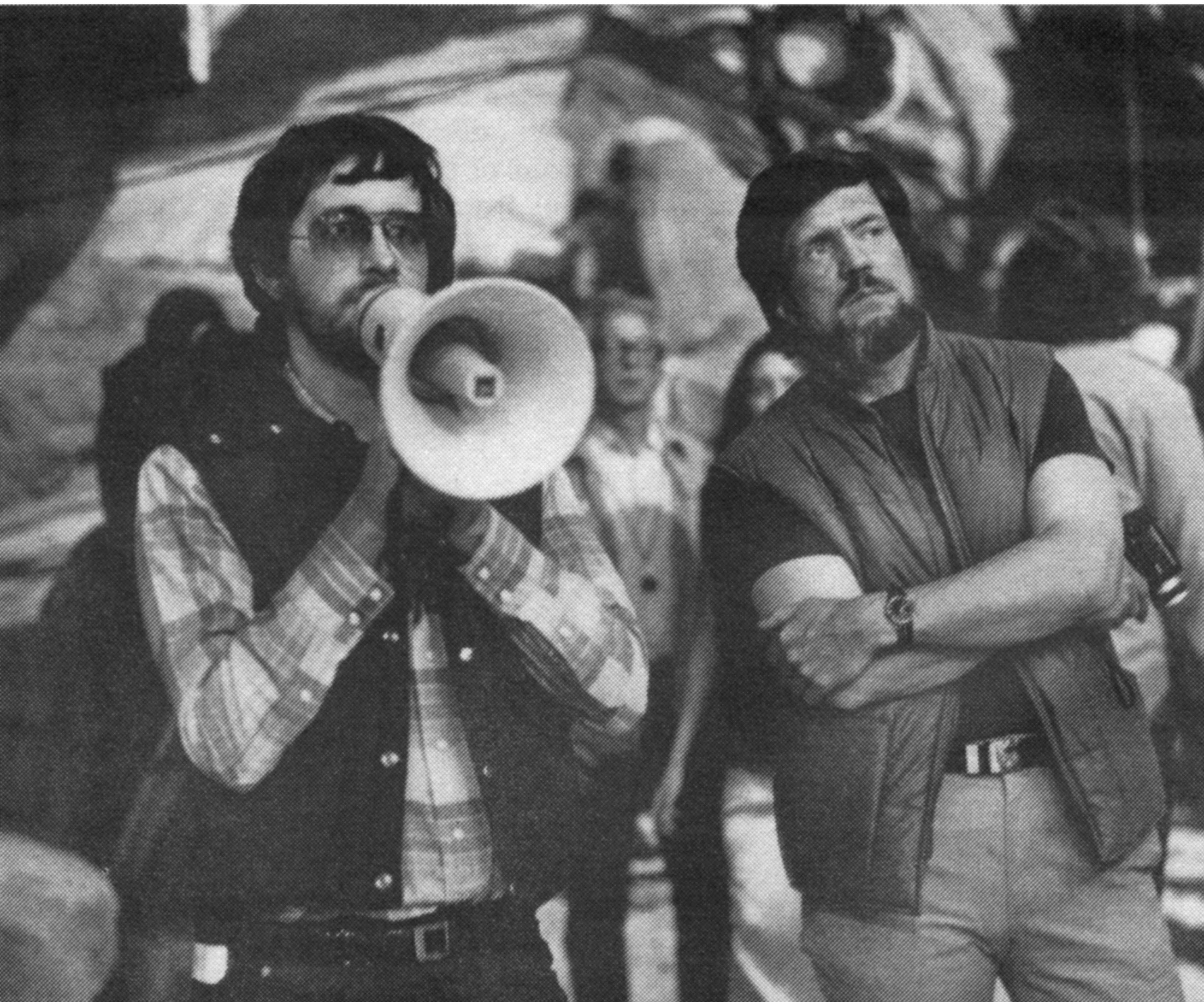
Mechanical effects expert Kit West and Steven Spielberg test the mechanical mummies that will appear in the catacombs of the Well of the Souls. *Photo by Nancy Moran.*

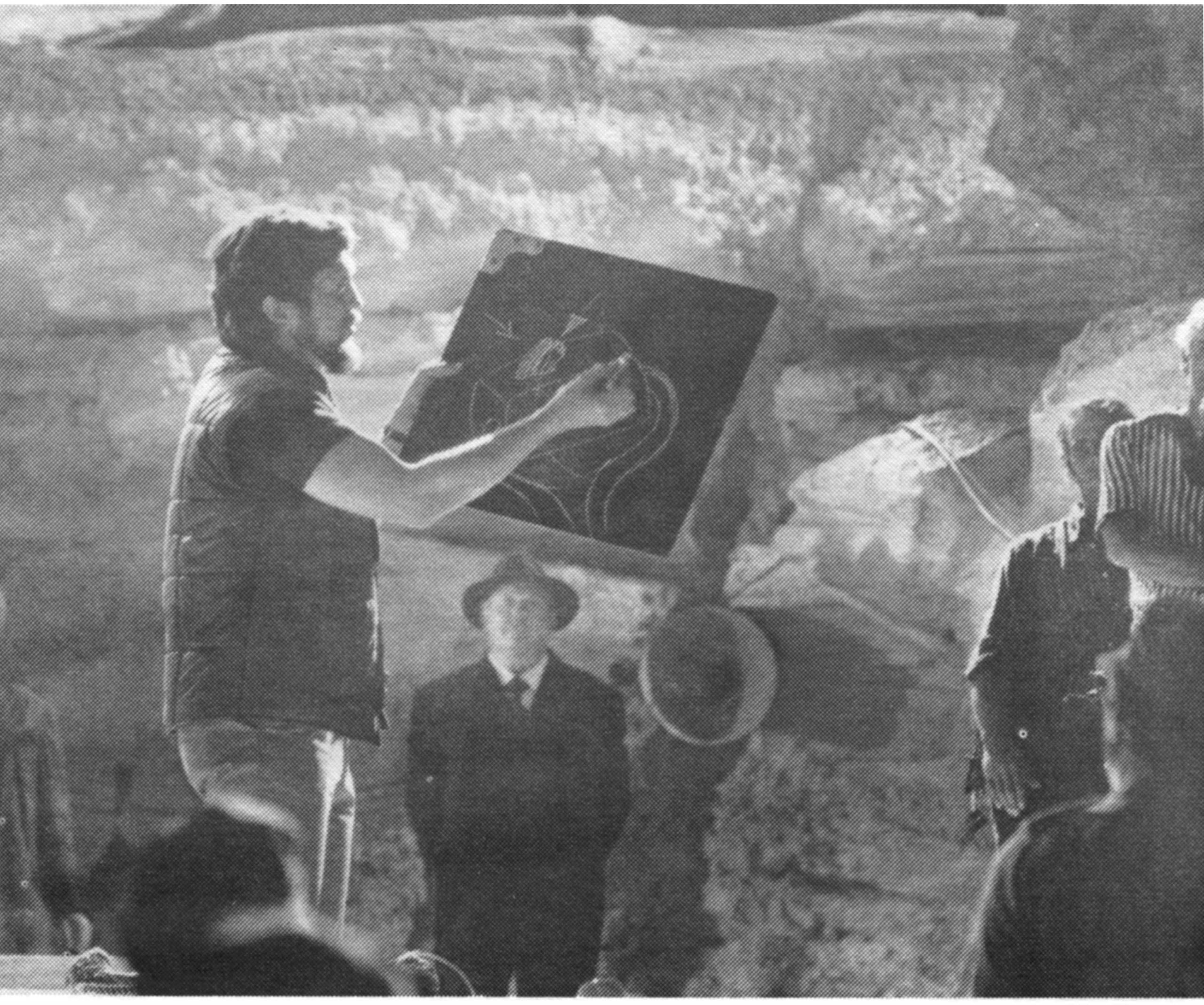
The horrifying mummies on the set of the catacombs in the Well of the Souls at EMI Elstree.

Second camera unit director Mickey Moore confers with his first assistant director, Carlos Gill, and stunt coordinator, Glenn Randall, at the rugged chase scene location.

Harrison Ford rides the specially rigged submarine periscope; the bearded Kit West, mechanical effects supervisor, watches from the water to right of the boat while Steven Spielberg oversees from the bow.



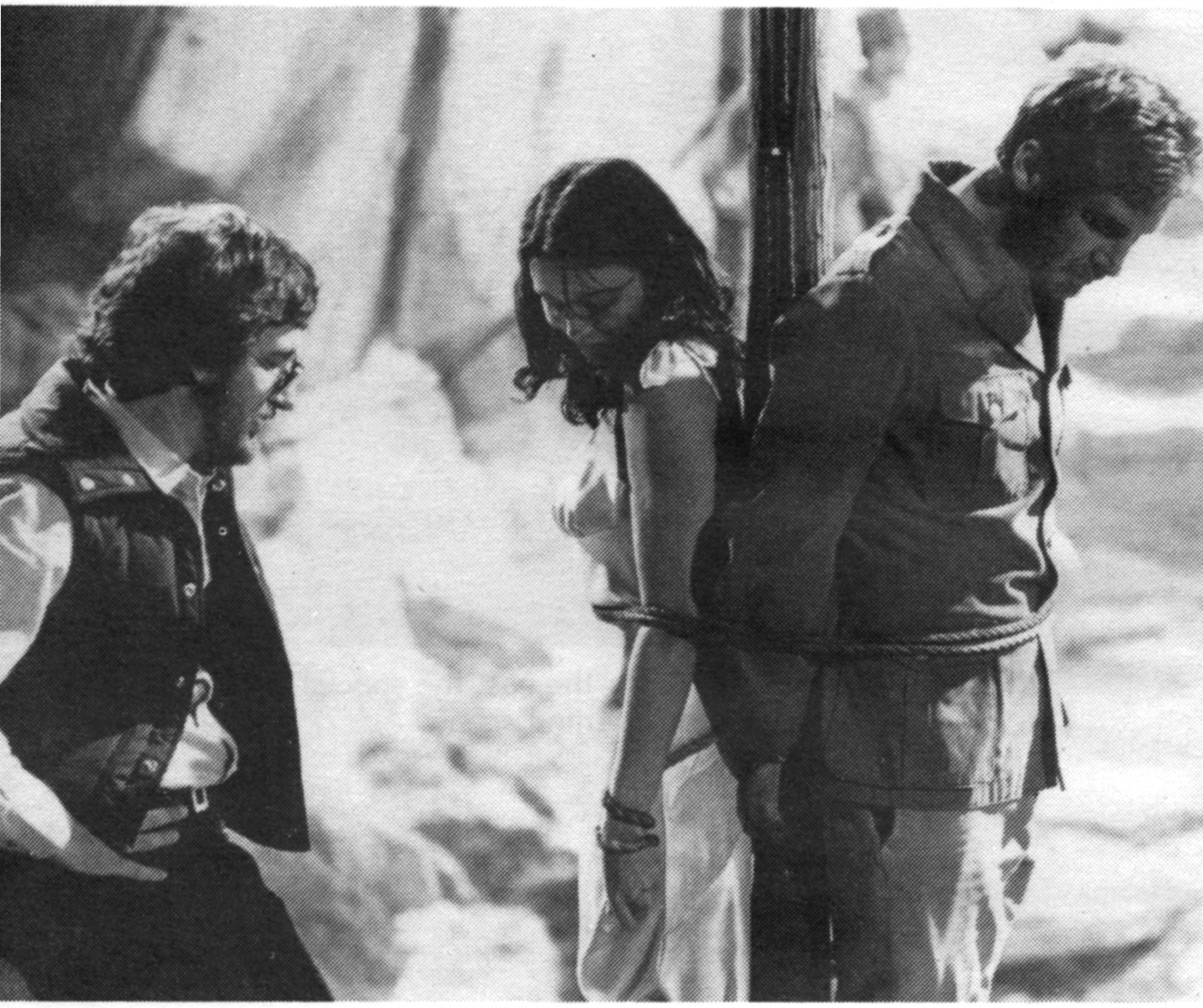




Richard Edlund sketches for the cast the special effects in the ark-opening scene.

Opposite, above: Steven Spielberg consults with Douglas Slocombe before filming the climactic sequence on the altar set.

Opposite, below: Steven Spielberg and Richard Edlund on the altar set. *Photo by Nancy Moran.*



Steven Spielberg consults with his stars Harrison Ford and Karen Allen just prior to the climactic scene.

the sergeant out the window. There has to be a justification to play that scene."

Steven is overjoyed with the results. "Harrison is giving the performance of his life, which I'm sure he'll top in his next film. But at least up to now (and this was after the sixty-first day of filming) this is the best I've ever seen him. He's just amazing, every day. But it has to look effortless and it does.

"Harrison never burns out. He tapers off the fun of the first take. Doing anything for the first time is usually better than doing anything for the twentieth time. After twenty takes everything becomes rather studied but you can get details right. The biggest danger is that when you get it on one take, you can't *believe* you got it on one.

"So you stop trusting yourself. Harrison says, 'I *must* be able to do better. It couldn't have been that good.' And I say, 'I don't know. It was great but we got it the first time. That's kind of odd.' So we do it ten times and then I'll say, 'It was number one, why'd we spend an hour doing ten takes? It was number one.' "

Not to lay on too much syrup, I should say Harrison Ford did much to make the film a very happy and human adventure onscreen and off. Such leading men are priceless. There were many moments when I tried to imagine how it would have been if Indiana Jones had been played by a mean fellow with either an inflamed ego or hangovers, or contrived crises over script, directorial mannerisms, God knows what. Harrison was so crucial to the film and so rarely offscreen that had he been unpleasant, things could have been really miserable.

George Lucas in Close-Up; A Chat with Steven Spielberg

"I feel that the final cut of a film belongs to the filmmaker. In France it's the law, but in the United States it's the person who pays the bills who gets that right."

—George Lucas, Executive Producer

George Lucas is a young man who is weary of business, something he has called a "necessary evil." He is well known not to like Hollywood and its studios, but he recognizes the need to confront the industry squarely and that means doing *business*. In his late thirties, he is a very experienced young man.

His intimates say he is good fun and a very staunch supporter and friend. I found him very approachable, if a bit too literal for my extremely tangential remarks. But he was always as blindingly honest as on one morning in the desert in September.

George Lucas created *Raiders* as a three-film concept, then shelved it in favor of *Star Wars*. When Steven Spielberg showed interest in the idea, George hired a writer to do the screenplay, hired Steven to direct, went to Paramount and made a deal for them to distribute it.

George Lucas: "That, in this case anyway, is the primary function of the executive producer. Apart from that, I come out to troubleshoot, help Steven in any way I can and generally watch over things.

"I think one of my main contributions to a film is being around because I have enough knowledge of how you make movies that I think I can make constructive suggestions. Many executive producers have never been on a movie set and wouldn't have any idea of how to solve some of the production problems."

"Is being an executive producer what you enjoy doing?"

"I'm not really that fond of being an executive producer. I'm only doing it as a means to an end. It's a job and I didn't really choose it. It chose me. I became an executive producer out of necessity and I'm hoping that by producing these few films I will get myself in a position to be able to make the kind of movies that can only be described as experimental in nature."

"What sort of films are you talking about?"

"Rather strange abstract films; I want to make them without having to go to the studios for permission.

"I am talking about using film as film—not as some means of telling a story but as pure film, which is just images and sounds. Right now there is no market for these kinds of films at all. It's totally experimental. It's an experiment to see if I can get the audience to have some emotional response to abstract images. If I can create an effect which generates in the audience an emotion *equal* to what is generated with a story and characters, then I will have accomplished what I was after."

"Do your experiments reflect a change in the film industry?"

"I think that, in general, the film industry is going to stay more or less the way it is. I think the biggest changes are going to be technological and not in content."

"What about filmmakers—will they remain subservient to the studios?"

"I think the filmmakers are getting a little bit more power because they're the ones coming up with the ideas and they're the ones who are making the films. That role is beginning to be taken away from the studios, which I would think is all to the good.

"Directors care a lot more about film and, along with the writers, they have one of the main creative inputs. A producer generally is only interested in film as a business."

"Is the only way for filmmakers to take control for them to become producers?"

"Not necessarily. Obviously the people who pay the bills are always in control, at least in the United States. I don't think anything is going to change that. So, in a way, you have to become a producer to get the control. And of course you *have* to have control over the film in order to get what you want.

"It's terrible to have a studio second-guessing you, looking at your dailies, telling you how to direct the movie and then coming in at the end and recutting it; it's hardly your movie anymore.

"In the case of Steven, I guess he would get final cut on any picture he did now, whether I was involved or not. I imagine he's had final cut on his last few pictures, but it's only because he's one of the top few directors in the industry.

"I feel that the final cut of a film belongs to the filmmaker, especially if it's somebody who writes and directs and creates the project. Then he should have a right to have the film completed the way he intended it. In France it's the law, but in the United States it's the person who pays the bills who gets that right.

"In the United States you can buy a Picasso and cut it up into napkins, if you like; in France you can't do that. It's against the law."

"You've got a lot of crew members on *Raiders* who've worked on *Star Wars* and *Empire*."

"It's a big advantage to have the same crew who've worked together on other productions. They know each other, they know what to expect and how to deal with it and with each other. It's hard to put together a crew, have them all meet the first day, and make a picture in a very short time.

"Over the years we've had the advantage of developing a good crew by keeping the people who work out very well and getting new people if this or that person isn't doing that well. So after a while you wind up with a very good crew. But it does take a lot of time and a lot of pictures to get to that stage.

"We have a very good crew here."

He paused, then added, "This film could very easily not be a hit. All films are a risk. I mean, there's just no way to know. You can't predict a hit." It's worth remembering here that when George first mentioned *Raiders* to Steven Spiel-

berg he was hiding out on Hawaii's big island, believing that *Star Wars* would open badly. He need not have worried.

"*Raiders* is a big adventure movie. Do you think that small personal films will become popular again, or are adventure and escape films the future of movies?"

"Everything runs in cycles. Every year a certain type of film becomes a hit and everybody goes out and makes the same kind of movie over and over again. But little personal movies are always being made and I think they always will."

"Do you feel a film as large as *Star Wars*, and the saga born out of it, has separated you from being a filmmaker able to make small films? Has it forced you to become a businessman?"

"I've found myself getting much more involved in business affairs, trying to stabilize and insure the continued growth of what we've gotten so far. The big jump was, I think, deciding to make a company in order to get my freedom. I felt that was necessary.

"I don't know that Lucasfilm is all that different from most other companies. The real difference is that most companies generate movies to make money. The whole concept behind our company is to generate money to make movies."

"What would be your advice to young filmmakers?"

"Well, there're a million pieces of advice one could give. But I think that one of the keys to becoming a successful filmmaker is persistence—never quitting and always working hard. And, of course, it helps to be good at what you do.

"When I was at film school I was a very good cameraman and a very good editor. I tried always to be good at whatever I did. That way I insured myself a lot of work and that way I eventually evolved into a filmmaker."

"Did you think early on that you would get to the place you are now?"

George said he never really thought about it that much. In fact, up until the success of *American Graffiti*—which appeared about halfway through the shooting of *Star Wars*, and, I understand, secured him his house—he was really just concerned about being able to get another job.

"I wanted to become an established director so that when

I walked into somebody's office he'd say: 'Oh yes, this person is qualified to direct our TV show,' or whatever. That was my primary concern. I had no idea this would happen."

"How is it that you and Steven, two of the most successful filmmakers, came to work together?"

"There were a lot of us who came up through film school, or whatever, and started out together. It was fate, I think, that we all became friendly, became successful, and remained friends, which is really what it's all about.

"It just happens that with Steven and me, we have known each other for ten years and now we are working on a movie together. It just happened that way."

"How is it being executive producer for a friend?"

"I generally let Steven do whatever he wants to do. I'm very sensitive to the director and what his problems are because I've been a director. And Steven takes suggestions. I mean, I offer lots of suggestions and he takes some of them and some he doesn't take.

"We've never really had any kind of a problem, like completely different points of view on the way something should be done. I think, anyway, that friendship can go beyond a film unless there's a real difference of opinion. It has more to do with ego than with anything else. If you don't let your ego get in the way there's usually no problem.

"And with regard to Steven, on budget and matters like that, so far I haven't had to say no to Steven (this was on the fifty-fourth day of production). He has been very diligent and hardworking on this picture, and has also been interested in making it within a budget.

"We have gone over budget in some areas, but some of those are things that even I wanted. I'd say, 'Let's spend the extra money here, let's make this right.' And Steven would say, 'No, no, we don't have to, we don't have to.' Those are creative decisions rather than business decisions. You try to make the best possible movie within the budget limitations. You have to go over sometimes. You just have to know when to do that and when not to do it. I think Steven knows that as well as I do."

George amplified his opinion of Steven's ability as a filmmaker, and it is worth printing in its entirety, because, although there isn't a negative in it, and it therefore lacks

spice, it has the merit of sincerity. George Lucas never throws praise around just because it sounds pretty.

"Steven does a great deal of homework when he goes into a picture. He's very organized. I think that one of the main reasons that the film is going so well and we are ahead of schedule at this point is that Steven has gained a great deal of technical knowledge on making movies.

"He's made this kind of movie before. He knows what to anticipate and he's worked in television, so he knows how to make a production move.

"And that's what it comes down to; if you're the least bit unsure of yourself or get surprised by the things that are thrown at you, that's what really takes the time. Steven is very decisive. He knows exactly what he wants and he gets right in there and gets it.

"And, you know, a film like this is a very difficult thing logistically. Very hard.

"As for final special effects, I'm involved by virtue of the fact that I own the company (ILM) that makes the optical effects. But we're trying to accomplish what *Steven* wants."

One evening on the bus coming back from location, I decided it was time to ask Steven Spielberg: "How are things—life—working out for you?"

The bus swerved to avoid a nasty-looking desert dog and for a moment the question and the answer appeared superfluous. When we found we were still alive, he replied: "On this movie? Or life generally?"

"Generally."

"Great. I'm very young yet. I've always been happy. I've been happy when I've been up, I've been happy when I've been down. I've never not been content, basically content, about the things I've done, either in my relationships or in my way of life.

"I just never really had that much to complain about. I've had to work so hard I haven't had time to complain."

Believing that anyone who can sleep well is all right, and that anyone who can't isn't, I asked if he slept well.

"Oh yes. When I'm making a film I sleep like a baby. Except for the first week. Then I have terrible insomnia. Usually the last couple of days I also have insomnia be-

cause I am sure I have missed the most important elements that would make the film either a hit or a miss. But right in the middle of the picture, I'm so punch drunk by the end of the day that I survive and sleep. The harder the picture, the better I sleep. I sort of swathe myself in it. Give myself over to it and it comes very quickly."

I asked what he did on the run up—or down—to sleep. "I read magazines, look at the pictures," he said. "And I watch television every once in a while. For the most part, I just go to sleep—about nine, nine-thirty."

"Do you wake quickly in the morning?"

"Yes, I start up in the morning sort of like a Japanese transistor radio. Although the older I get, the longer it takes to snap to."

I asked how he responded to criticism. Did he fear it, dread it, or what? Well, he said, he actually had friends who were film critics. He had never been able to be angry with them, as some of his contemporaries were angry.

"Anyway, as a rule I never read reviews. People can't quite believe that. Though I think I did read three reviews of *Jaws*, and I read two or three on *Close Encounters* because we had *Newsweek* and *Time* covers and I read those.

"And I read the *Rolling Stone* interview. I didn't read a single American review on *1941*. I read a dozen or so European reviews which were all very good. But I read no American reviews.

"If they're bad, I believe them and say, 'That's right, I'm no good at that'; and if they're good, I also believe them and say, 'Yes, I *am* good at that kind of a scene.' So I find myself confused.

"Instead I try to stay open to influence and views but not from reviews. I think the most dangerous thing for me to do would be to start believing my own reviews.

"But if there is a really really outstanding review—well, I will eventually . . ."

He trailed off there and I saw the human being shining through. So he breaks his own rules once in a while. Well, what are rules for except to be broken in times of great delight?

I brought up his family. He was clearly very comfortable talking about them. He is a happy man, well-loved and why shouldn't he be, a nice middle-class boy, doing well,

with three sisters and a mother who makes the best blintzes in L.A.

I asked him if his mother was proud of him, which was rather like asking him if he liked going to the movies.

"Oh yes. My mom's proud of me and I'm proud of her. She's celebrating her second year as a restaurateur and she's having a great time. She is sixty, looks forty, and acts twenty. And she is having a hell of a good time. She's a big success. Everybody goes to the restaurant. The food's great. It's called the Milky Way. I'll be there in a couple of weeks—I can't wait to get back and eat her blintzes."

Steven said he had a great family, all of whom pulled for each other. "Listen, they were part of all the movies I made when I was twelve years old. They sold tickets for a quarter apiece for the 8mm movies I was making. My dad financed them—about twenty bucks per film.

"My sisters sold popcorn in the concession stand and they were all in my films as actors. Each of them died seven or eight times. My little Westerns, my little war stories. It's all part of the family. And my family was very smart. They let me do it.

"They vicariously had the thrill of going to Hollywood with me; but they got into more sane occupations. Except my older sister Annie, who is becoming a director. And she is an awfully good writer, an awfully good writer."

Steven Spielberg himself majored in English. He did not major in films. "Well, they didn't have movies or television or radio courses at Cal State Long Beach at that time. So my only recourse was to have a fall-back film career."

Then the bus pulled in at the Sahara Palace Hotel in Nefta. My problem was that I lived in Tozeur, an hour back there where we had just been. I hadn't noticed. You probably think we were enjoying ourselves anyway.

Steven Spielberg:
A Director's Guide to This and That

"It only works if the script works."

—Steven Spielberg

On one more relaxed day, David Wisniewitz and I had a rare opportunity to talk to Steven at length.

"What is a difficult film?"

"I see every film as a difficult film. No one film is more difficult than any other, in my experience. A film like *Raiders* or a film like *Close Encounters* is really no more or less difficult than a film like *Kramer vs. Kramer*, a picture that essentially takes place in local exteriors and very contained interiors: a controlled situation.

"It's just the proportion of anxiety that you choose to lend an experience."

"What does a director have to know?"

"I certainly supervise everything. I'm involved in everything. I make the final decision on what gets on the screen in every department. To be a good moviemaker you have to know everybody's job as well as he does. You have to know costumes as well as the costume designer. You have to know editing as well as the film editor. You have to know cinematography in theory—not exactly how to light it, but what you want from it—as much as the cinematographer knows what he wants.

"But to go in and dictate to everybody in all the departments, to say, 'Don't give me anything else,' cuts off what

they have to offer. And the people in those departments have so much to offer; that's why they're good. They've been working thirty-five, forty years in the film business—because they're great at what they do."

"How do you feel about dailies?"

"I love my dailies depending on the day, and what was shot the day before. Sometimes when I have a doubt about a scene, I say to myself: 'It'll look better in the dailies. It'll work.' And all night I say: 'It didn't work on the set but I bet it looks great on film.' But it stinks in the dailies the way it stunk the day before. You just know whether something works or not. So many times we walk away lying to ourselves. And of course the more we lie to ourselves, the more money we save, because it means not having to go back and do seven or eight more takes to get it right."

"How do you make a film work?"

"That's very simple—it only works if the script works. You can do anything to a movie, you can change dialogue, you can change the feelings the characters have about each other, but if the story and the basic script won't function, the movie on the whole isn't going to click. The script's to blame in many cases where the movie doesn't work. And the script's responsible so many times when a movie does work.

"Of course people love to say: 'This movie is terrible, but the script is great. You should have read the script.' I think there *are* times you can ruin a good script with careless direction and lazy acting.

"Or you could take a wonderful script like *Casablanca* and miscast it—put some toughs in it and put Zasu Pitts in it—and make a movie that's not as good as the one with Bergman and Bogart.

"And back to the business of 'lying' and saving money on takes: you have to learn how to budget your time so that you spend your thirty or forty takes on something that *must* be right to make the movie work; but then economize on what isn't a make-or-break."

"How do you work with actors?"

"I have to be a different director for each actor, moment to moment. It's not my reputation. I'm not known as a performance director. I will be if suddenly I make a little film that makes people cry, sing, and laugh. They'll

say: 'I'll be damned. He can work with actors.' But the movies I've made—except for, let's say, *Close Encounters*—are so fraught with logistical difficulties and special effects and just crazy ideas that the performances seem to be overshadowed by the sheer drive of the movie. In fact, they are not. I've been as concerned about my actors as I've been about my scripts and the visualization of them. *Jaws* is a character study, not a shark fest. That film would not have been as scary without the empathetic performances of Scheider, Shaw, Dreyfuss, and Gary."

"What makes a good director?"

"More than anything else it's just having a good imagination. You can have a very bad eye and not essentially know where to put the camera. You can *develop* a good eye, after all, if you have a good cameraman working with you over the years.

"If you have a good imagination and a good story sense, you like to tell stories and you know a good story when you hear one; if you just know what entertains *you*, if you know what pleases *you;* if you think you can project it to a lot of other people, I think that's what makes a good director.

"It doesn't take a diploma, doesn't take four years of college, and essentially it doesn't take anything more than a desire to try it out once. I'm not talking about trying it out with 35mm movie film at a major studio, but trying it out on 8mm the way I and a lot of my contemporaries began."

"Who controls the movie industry now?"

"The big studio chiefs are gone: the chiefs who used to control what scripts the directors received and how the films were edited and released. I think it's a shame it's all in the past because those old nickelodeon producers, who worked on the tramp steamers, worked their way through vaudeville and the Yiddish theater and then wended their way west to Hollywood, were just stunning talents.

"They really knew how to make ten great movies a year—each of them. They controlled their directors, their scripts, and the entire ball of wax.

"Today's directors have sampled freedom and now they no longer want to be told what to do by anybody but their closest friends. Depending on who those directors are, this is either understandable or murderously dangerous. When

I'm executive producer I've found myself close to saying, 'I think you should do this over again,' or 'Do it differently.' I've said it once or twice but I've bitten my tongue more often than I've spoken my mind because I've put myself in the director's shoes."

"Is it difficult to remain friends with people you're working with—George being a good example."

"The important thing to me, working with George Lucas, is that George and I have been friends a lot longer than we've been working together. George and I have been working together now for only a year. We've been friends for eleven.

"And it's just very important that nothing get in the way of that friendship. This movie is the proving ground of whether we—not just George and me, but all our friends—can continue to make movies together without feeling envious or competitive or resentful."

"Why produce films if you're a director?"

"My own theory about producing is I'll produce films that I would have otherwise directed. All the movies that I'm producing for other directors have come from my own backlog of stories and ideas. I would have done those movies had it not taken me two years to do *1941* and three years to do *Close Encounters* and a year and a half to do *Raiders of the Lost Ark*. Movies slip away—you can't do everything. But I like to *think* I can do everything, I *want* to do everything. So I'll live vicariously. George wanted *Raiders* made because, as he says, 'I just want to see this movie.' I feel the same way about several projects now in development that I won't be directing but producing instead."

"Do you think *Raiders* will be a hit?"

"I never think about it that way. Sometimes movies are a lot of fun to make.

"I try to know whether the film's a hit or a miss based on the sneak preview. If the audience loves it, they'll tell their friends to see the movie. And maybe it'll make a few bucks. I've attended raucous, ecstatic previews for movies that the public later shunned. You figure it out.

"I'm pretty numb in the preview; I usually pace. I never sit down. I stand by the back door. And if people get up and leave I run over to them and ask why they're leaving. I ran over to a couple who ran out of *Close Encounters* at

the Medallion Theater in Dallas and said, 'What's wrong?' Because they left after the first half-hour, one of the most exciting parts of the film.

"The man said: 'Look, my wife here is having a baby but we just loved what we saw.' And he rushed her to the hospital to deliver their first-born.

"With *Jaws*, I was standing up when a man ran out in the first twenty minutes of the film and threw up at my feet and then ran into the bathroom, and ran right back to his seat and saw the rest of the movie.

"I usually see all that while I'm pacing. I don't often watch the audience watch the movie. I *listen* to the audience watching the film and record it on tape. Then I play the cassettes over and over in the car driving back and forth to the cutting room, making changes based on the preview.

"There's a moment in every film, many moments, maybe several hundred moments where you think you've got the biggest hit of the century; and there are other moments when you think you're never going to live down the embarrassment.

"Those feelings sometimes occur within an hour of each other or within a day or during the editing process. I have never worked on a film thinking, 'This is great, great, great' from beginning to end."

Shooting from the Hip: Snap Decisions and Time Spent with David Tomblin

"A lot of movies are like the military system—rank and file. But in this company everybody takes the position, 'We're all workers. There are no generals.' "

—Steven Spielberg

"There are two sorts of people in the world," said the seriocomic British musician and actor Neil Innes, "those who divide the world into two sorts of people and those who don't."

"There are two further sorts of people," said Franco-British subeditor and part-time philosopher Claude Lescure, "those who are pointers and those who are pointers' helpers."

True. A pointer is someone who points at someone or something and says, "Look!" The helper is someone who looks and thus helps the pointer make his point.

All good film directors are pointers. "Look," they say. "Look at this for 116 minutes," and we, their helpers, do. If we like what we've seen, we help even more by becoming pointers ourselves and saying to our friends: "Look!"

"Look," said Steven Spielberg, on the bus from the digs to Nefta. It was the dying of the day over the desert. The wheels of the bus sent dust into a scurry of wind and a herd of sheep whipped up small storms in the middle dis-

tance. "Look at that. If David Lean were here he would get Freddie Young's camera on that *so* fast."

David Tomblin, one seat nearer the front of the bus, turned around when he heard Steven pronounce his first name. "Yes, Steven?"

"Look at that dust, that sand," said Steven.

"Great," said David.

"Let's get it right here tomorrow," said Steven. "Get the sunset right here."

It had been a very long day, and David was as tired as anyone but by no means switched off. "The sunset here tomorrow?"

"I think we need to be here earlier," said Steven, increasingly excited. "It's too slanted now, it's coming straight into the camera."

There was no camera yet, but it was obvious now to David that a setup was being planned, ad hoc, as we rode home.

"Well," said David, ever practical, "it's forty-two miles from that location to here so we're going to have to leave pretty early to get here. Especially if we're to be here *before* this time."

Steven, very excited, said, "Yes. I want the sun higher than this. Look, see the smoke coming out of the wheels of that car. We *have* to do one. Those trees are real good, real good."

"Right," said David. "We'll work it out. We have to wrap at the first place to get here at, say, 5:30." His evening reverie now disturbed by thoughts of new planning, he lapsed into a creative silence; not the way he had hoped to approach his dinner, but very much part of the job.

Next day was Saturday, September 13, my last full day with the picture.

A new plan for shooting was drawn up and inserted in the call sheet. The first unit had been due to join the second unit anyway, for one of the few linkups in these locations. The rendezvous was at a desolate place called Metlaoui near a phosphate works where vast, long, irredeemably ugly conveyor belts bear phosphate away from jagged quarries. An earlier wrap was now planned at Metlaoui, as David said it would be, so that the first unit could speed away to the new location near the trees at sunset on the airport road between Tozeur and Nefta.

On Saturday we all met at Metlaoui, for a rough day of screeching tires, relentlessly gritty dust and pitiless sun. All the male principals were on call and all turned out to be very busy. There were no fewer than ten stunt men and much of the day was spent with the "Nazis" sitting in the command car. There were a number of other setups involving vehicles described in continuity notes, with simple unadorned impact, as: command car, front smashed, right-hand windscreen broken; truck, front smashed; truck, right side canvas ripped; truck, right-hand door missing; truck, front windscreen smashed. That should give you some idea of the day's shooting.

I decided to stay behind when the call came to decamp for the sunset shot at Tozeur. Although it was the right decision for what I wanted to see, it turned out to be the wrong decision for what I missed. It was left for Steven Spielberg and a dozen others to tell me next day what happened on the airport road at sunset. It was quite a topic.

What I had wanted to see was the ability of the actors to withstand the violence of the command car screaming and shuddering to an emergency stop in a blanket of grit particles and sandstone-and-rubber-flecked dust clouds. The second unit rather lived its own life and made its own piece of film. It was a pleasure lying behind my protective shelter of rocks to watch schoolboy heroics reenacted by adults, and smart adults at that. It was also a chance to see Carlos Gill at work as first assistant director of the second unit and Paul Beeson on camera. Carlos was a popular and pleasant assistant director, typical of the infusion of talent that came with the Tunisian location. Paul Beeson had brought a breezy British pace to events in the second unit. It was a nice change and I drove back to Tozeur with no regrets.

Meanwhile, out there on the blazing plain on the road to Nefta, things were going wrong. No one seemed to want to talk about it that night. It obviously wasn't the end of the world or even of an era, so I waited until Sunday. After a number of versions, I heard the Spielberg story.

Phil Schuman, David Wisniewitz, Steven, and I were passing the time of day at the poolside when David said that "last night was one of those typical mad scenes of everything going wrong and nothing making sense. A very minor scene in a way, but very complicated. You had so

many elements in a very small scene. All the camels and sheep . . ."

Steven added, ruefully: "It makes it worth it when you get the shot. But I don't think we got the shot last night. First time, a truck stopped right in the middle of the sun. Second time, the truck stopped too far away from the sun, so I couldn't get the truck and the actors in the same shot. Third time, there were no camels in it. Fourth time, the sheep walked away, and the fifth time, the sun went down.

"It was getting dark so we went home. Sunset shots are always a mad scramble because you're dealing with an hour hand that's moving as fast as a second hand in the last four minutes of sunset.

"I've never missed a sunset before so I was kind of crazy. I haven't shot that many sunsets, but when I *do* get them they're usually pretty neat.

"The two or three shots in *Sugarland Express*, with sunset and production and dialogue and story—all in one shot—we waited three evenings to get. We quit shooting at four o'clock each day, just to wait for the sunset to see if the clouds would be pink.

"And if there were clouds that day we'd go out there and wait. And if there were no clouds, if there was a blue dome, like here, we'd shoot something else.

"It was sort of upsetting that we missed the sunset last night. Then I was back in the car coming back to the hotel, realizing that that sunset wouldn't make or break the picture. Why then did I pull the company out of a location forty kilometers from there to get a shot of the sun through trees when, in fact, it's conceivable I could end up not using that shot whether it turns out good or not?

"Well, we had the time. We're eleven days ahead of schedule, so I can afford to be a little capricious."

I thought our experiences in the Sahara, from the first to last day of shooting, reflected absolutely terrific organization and a high quotient of maturity from the dashing, even daring, vision of Steven Spielberg—if he wanted to be capricious one night, I couldn't argue with that.

But I think it must have been a sudden, sharp attack of Lawrence of Arabia on the bus that Friday evening that caused the aberration of Saturday, September 13—a rush of creative blood to the head when lesser spirits were cooling down for the evening.

For as Steven said later, at the poolside, "I realized I didn't have to have that shot."

Of course, if it comes to that, the great public didn't *need* us to go to the Sahara Desert at all. The whole human action could have been shot at Elstree with bits and pieces of desert blue-screened in by ILM at their leisure.

But if it did come to that, then moviemaking as we all have come to know and love it is over. No more deserts or mountains, or deep wicked jungles, no more raging rivers or cruel seas? Oh no! There will always be pointers and their helpers striving to bring their passions to our larger attention, so it probably won't come to that.

"David maintains the sanity of the company against all odds. He takes the heat and distributes it evenly. Everybody feels the push and I don't think it is anything other than an enthusiastic push. It certainly isn't crippling." Thus Steven Spielberg on David Tomblin.

David had tremendous experience, great competence, and a natural sense of how to unite a very taut London crew with a brisk Hollywood director. With him, nothing snapped.

Steven Spielberg again: "The great thing about David is that he is the first assistant director I have worked with who uses the lash with very little sting, with the result that you can push the company along without having anyone say, 'How dare you shout at me, you can't talk to me that way.'

"A lot of movies are like the military system—rank and file. But in this company everybody takes the position: 'We're all workers. There are no generals. No officer rank.'

"But there *is* order. The guy is just wonderful."

It was curious Steven should have mentioned military service. David had enjoyed his time in the service, which was spent in the Royal Marines, aspiring to no rank higher than marine. "The bottom," he said. "As low as you can get, at least in the Marines."

This emerged during conversation on my last day on the film, Sunday, September 14, around the pool overlooking the oasis, listening to three separate cassette players. One, Tomblin's, was playing some pleasant middle-of-the-road music. The others were medium to hard rock and

country. In the desert air, in congenial company, there seemed no clash.

I asked David why he had stayed at the bottom when, with a small amount of effort, he could have risen to at least *one* stripe.

"It suited me," he said, offering me a drink from a large communal bottle. One of the magnets of the poolside, dispensing a little news and some caustic views, David was usually surrounded by friends of all sorts and people who came by to talk for a moment.

I brought up Steven Spielberg and *Raiders*. "What do you say?" I asked him.

"I say he's done it," he answered. He dragged a huge bathtowel over the lower part of his body which was getting very red with the unaccustomed sun. He was not one of the bare-legged chaps on location. "He has beaten the schedule.

"I didn't think he could do it, but he has done it. He said he could, he said he would and he did. It was done by pushing and allowing the schedule to push him. Forward. Good luck to him, I say. He's very good."

I asked what it was like to work at great speed. "Hard," said David. He described the previous evening on the airport road when everything had gone wrong, the location where the unit had moved to get the sunset. "You get nights like that. Awful, but there haven't been many like that on this film. It's been an enjoyable film."

David Tomblin, Patrick Cadell had told me back at Elstree, was a dark horse. Left school at fifteen, didn't boast about anything, but was actually one of the men behind *The Prisoner*, the great television serial with Patrick McGoohan. David had written the stories of several episodes and directed two as well.

"Do you know we didn't make a penny out of that?" David said.

"But you *did* make a work of art," I said.

"Huh," said Tomblin. "That didn't pay any bills."

I asked him what sort of art form he thought film was.

"It's not modern art, is it?" he said. "And in the case of this film, not contemporary, since it's set in the '30s. Traditional art, I would say. None the worse for that, but hardly modern."

He wondered whether I would like lunch as there was a

waiter approaching and we might not see him again for hours. I said yes; some egg and chips (French fries) would be great. He ordered four, five lots.

Mickey Moore came and set up a lounge opposite David Tomblin. He was a welcome addition to any group and, as he had been taken ill the night before, it was good to see him out and about. He said he was feeling better.

But he didn't look better and as he lay on the lounge he began to shake very violently. David took charge, put a large towel over him, and had me call Dr. Hodder. Mickey protested, apologized for making a fuss, but realized he was quite ill.

Pat Carr in the production office immediately set about making elaborate and urgent arrangements for a hospital plane to fly to Tunis from London, and a place was secured in a major London hospital. Medical help arrived at the poolside, expecting to carry Mickey to his room and administer proper treatments. He, however, was *not* going to be carried while he could still walk.

About one hour later, a huge crowd of *Raiders* folk gathered in the lobby of the Sahara Palace to say au revoir to their old friend. He, bitterly disappointed at having to leave his beloved second unit, all of whom were assembled for the farewell, walked to a waiting car, vowing to recover.

Not a few were in tears and worried whether Mickey was not, in fact, worse than his walking suggested. Fortunately, he recovered, not in London, but home again in Los Angeles.

At the poolside, once again impressed with David's speed and efficiency, I asked him if he had time for family life. He said he had a wife and three sons, all doing well. His sons were progressing nicely in school and he was a happy man. He'd be happier still, he said, when he was able to take up his next life.

"What is that?"

"I'm going to run a hotel."

Well, what do you know? I had talked to him on location toward the end of the day the Flying Wing was blown up, and asked him what he did in the evenings. He said he would not answer intrusive questions. "Come on, David. What do you do?" David Wisniewitz asked him.

"Do you read books?" I asked.

"Never read books," he said. "Are you recording this?"

"Yes."

"Oh, well then."

"Are you looking forward to filming *Gandhi?*"

He said he was. "The last of the big movies. There will never be another like that. Not as big, not on that scale."

"How many extras?" Kathy Kennedy asked.

"About a quarter of a million," said David, smiling. "But I don't have to sign them personally. My assistant does that. No. Only joking."

(Many months later I heard that half a million had turned out for *Gandhi*'s funeral scene. The crew had expected fewer and the worst of it was that many of those who did turn up, unasked for, unhired, were in modern dress. What a nightmare. Poor David. On *Raiders* the worst that happened in the crowd scenes was that extras tended to look into the lens and grin.)

David Tomblin is a lovely man. And typical of many on *Raiders*. Assured and decent and loyal, they were, as Robert Watts said, the sort of people one would like to see again. No surprise then that *Raiders* worked out well.

The film is only as good as the individuals and the amount of effort they choose to lend the experience. David gave a great deal of himself. Strong when the need arose, and kind and gentle to the folk who needed that kind of easy push. And not so smart that he didn't find himself in camera range—twice, and still with the decency to blush.

The Violent Moment of Great Illusion: The Stunt Men

"Stunt work to me is memories, friends, and eight-by-tens."

—Terry Leonard, Stunt Man

There had been great excitement at Elstree when the first rushes from the second unit in North Africa were screened, one lunchtime in late August.

This was our first sight of the "second movie" to which Steven later referred when he was paying tribute to Mickey Moore, veteran director of the second unit. "I'm making one movie, he's making another," Steven said.

After about seven weeks at Elstree, many of us had grown accustomed to the many faces of the sound stages. We no longer marveled at the snakes, weren't terrified by the catacombs or amazed at the towering height of the statues in the Well of the Souls—we were suffering, it seemed clear, from interior languor.

Then . . . ZAP! on the screen one lunchtime leaped a searing convoy of Nazi vehicles screaming across the desert and demolishing an aqueduct. It was our first view of the truck chase from the digs to Cairo; and the first real indication of the splendors of the very great outdoors of North Africa.

"Great, just fantastic," cried Steven from his seat. "This *is* the desert. This is not shot on some back lot somewhere, that's for sure. And isn't it great for me not to have to *do*

it. To watch it from here. This is the way. I think I'll be a producer. Who needs to direct? Just watching dailies. Isn't it great?"

"It looks hot," said someone in a whisper.

"It *is* hot," said Steven, who is from Arizona and therefore something of an expert on deserts.

Already out there in that heat, providing us with our first desert dailies: Paul Beeson, cinematographer, Carlos Gill, assistant director, Les Dilley, art director, Maggie Jones, continuity, Magdalene Gaffney, makeup, and several crew, all led by Mickey Moore. Also there were the stunt men, those brave men who were doing as much as anyone to insure that the audience would be brought to the edge of their seats.

Two or three times in Tunisia I visited the second-camera unit in their wilder desert where, as I have described, the facilities were down to the bone and so too were fingers sometimes. Everything I ever wanted to be or do, as a small schoolboy during World War II, these men were doing. Fighting Nazis and winning; being Nazis and losing; leaping from vehicle to vehicle; tearing across vast desert ridges on horseback, falling to the rocks as if dead. And yet, with it all, surviving and going home to mother—in this case the Sahara Palace Hotel, the hot baths and showers, the healing ointments and unguents. And so, very early to bed, tired and fit.

Early one morning, Phil Schumann drove Kirsten Wing, David, and me out to visit Les Dilley, who as art director had a very important role in seeing that man, machine, and desert looked as good as was possible.

This was easy at Elstree, checking everything in the controlled environment of a Norman Reynolds interior—a tweak here at the vegetation in the South American temple, a final check on the beautiful miniature map room. But when the call sheet in the desert said: "Dress road through palm trees for chase and stunt sequence," it took an imaginative and patient man to sit out there day after day, executing it.

As Mickey Moore and Paul Beeson were discussing a setup involving Sergio Mioni, a pleasant and modest Italian stunt man, Les Dilley told me what was going on. He is a stocky, fair-haired man with a tendency to redden under the sun; but he had been outside, under such intense heat,

for so long on this gig that he was beginning to acclimate and develop a real tan.

"Tell me about these trucks, Les," I said.

There was a battle-scarred truck in the chase, one that had been through scaffolding and really been smashed. "This was built specially, based on an American GMC, a 1943 model. There'll be a man hanging from this truck. There are the other vehicles as well: a Mercedes staff car, a Mercedes truck, a command car and a motorcycle combination. All specially built and it wasn't easy. We had to have a duplicate set for various reasons. Staff cars of the period do actually exist but private collectors have them and wouldn't let us use them for this sort of work. Understandable. We ended up having the Mercedes built by Classic Cars of Coventry, Jaguar specialists. In fact the Mercedes staff car has a Jaguar chassis."

At Elstree Frank Marshall had taken me to see some of the vehicles. He showed me the concealed seat belts and disguised roll bars, the places where camera mounts and stunt rigs could be fixed and attached. The vehicles had been skillfully aged. Frank said they were so accurate they could be put in military museums if they came out of the chase all right. They were magnificent-looking vehicles and the period impact was profound.

Les Dilley explained what happened in the great Indy-under-the-moving-car stunt. "As I said, there's a man hanging from this truck, the troop carrier. Indy, on horseback, rides alongside, yanks a passenger from the truck and throws him into the road. Then he fights the driver and he drives the truck himself.

"By this time, all the other passengers, Nazis, are a bit irate. Eventually Sergio Mioni, playing the bulldog sergeant, climbs back over the roof down onto the cab. He comes in through the window and hits Indy, sending him out through the windshield. Indy shoots over the front of the truck, hangs on but eventually loses his balance and falls underneath.

"That's the man hanging onto the truck that I mentioned. The Nazis throw the brakes on. Indy hangs underneath, gets his bullwhip out, ties it under the truck and holds on. He is dragged along. Eventually he pulls himself back into the truck, climbs through a big hole in the side, gets back in, and does exactly the same thing—gets rid of the driver.

"Now Indy is driving the truck and eventually gets into Cairo."

Les Dilley said that Terry Leonard (a tobacco-chewing hero from Chatsworth, California, born and bred in cowboy country) had done the major portion of Indy's stuff in the trucks.

Martin Grace, Harrison Ford's double in most of the Elstree stunts, had played a German out here in the desert, the one Indy threw out of the truck onto the road. So an Indy double had beaten up another Indy double who was pretending to be a German.

Later that week, when most of the desert work had ended for the great Terry Leonard, we asked him whether it was a good feeling to have it all over.

"Well, yeah. You like to get through the stunts safe and clean; and you hope everything that you do is spectacular. You know that's what you get paid for, to put that image on the screen. That moment of illusion."

"Do you feel excited going through a stunt?"

"Sure. And you can almost feel when something is going good. You've got to have a definite sense of pacing, timing, so you can feel it. But of course when you're doing the stunt you can't really tell what it'll be like visually. But you can feel your own timing and the way things are working when they're going good."

We were standing out in the middle of a barren patch of desert as he spoke, the classic American adventure hero, leathery face, clear eyes screwed up against sun and sand, strong as a horse, very relaxed and utterly confident. His only hatred: flies.

"You know, you always get an adrenaline rush as you do stunts. You do them for the challenge and the excitement and the people you meet and the places you go and the money you make. But probably not in that order.

"The adrenaline rush is a high—I'm not into drugs or anything but people talk about a high. When you do stunts you get a natural high that I guarantee nobody in the world could match.

"It's like racing cars. It's like being a football player before a big game. You know, you're pumped. And you got to keep that adrenaline pumping as hard as you can and still keep it at a level where you don't make too many radi-

cal mistakes because of your high. You get too excited, you can overdo something."

David asked Terry if he'd ever found himself in a stunt in which things went wrong and he didn't have time to correct them.

"Yeah. Sometimes in a stunt things happen so fast you don't have time to react to them. In car work there is a little more time if you throw a wrong spin or you are off your mark. You can feel it as you're going through. But there are some times there isn't much you can do."

"When you're doing a stunt with someone else, say you're under a truck while it's being driven, do you worry about the driver?" I wondered.

"I don't give him one thought," said Terry Leonard with much emphasis. "That's why he's here. I've got confidence in him, we've done many many things together. I just eliminate that from my mind, because if I were going to concentrate on what I think he's doing then I'd have a split second under that truck where I am not paying attention to what I'm doing."

I was thinking quickly about those moments "down there" under a moving vehicle, holding on, the wheels on either side, the vehicle above, the earth underneath. The speed, the dust. The bumping and swerving. What hell!

Terry continued, "But it is tough on Glenn when he's driving the vehicle. He can't go too fast because that would start a vacillating action underneath the truck. Once you start swinging back and forth, the more you go to one side, the more you go to the other side, and pretty soon you are totally out of control and those wheels will get you. It puts a lot of pressure on him. If you run over somebody there's no excuse in the world that's going to make you forget that it happened."

We talked about friendships—the trust and the high stakes.

"Well, I got kinda my own little expression on doing stunt work. Stunt work to me is memories, friends and eight-by-tens. You do make a lot of friends, a lot of real close friends. You never get into a position with a man on the street that you do in stunt work. You are involved with people that you trust and respect and have confidence in. There isn't a time when they're not there when you need them."

"How do you deal with a tragedy?"

"Sometimes you can't. Fortunately I have never been on a picture when anybody was killed, although that has happened. On *The Wind and the Lion*, down in Spain, a very good friend of mine was severely hurt.

"I thought he was never going to walk again. We flew him out of Spain on an ambulance plane, back to L.A., and I just couldn't continue for the rest of the day.

"Then you have to take into consideration that nobody has a gun at your head, nobody is *making* you do this stuff. But you still can't take away the emotion once something does happen."

Terry Leonard has been a stunt man for fifteen years, beginning on a John Wayne movie. It was one of that actor's doubles who got him started: "Cliff Lyons, he got me started, so here I am."

Before we let him go, we asked Terry what it was like working with Mickey Moore, who began in films before anyone on *Raiders* got started in films.

"Well, Mickey and I have done a lot of films together," Terry said. "He is one of the grand great gentlemen of this business and I can't say enough for him. He is creative and he's knowledgeable: he knows stunts and the problems that the guys have; he knows when he can put the pressure on and he knows when he can't.

"He never gets impatient when you are trying to set something up. Injuries can occur if preparation is poor, so Mickey gives you all the time you need. You don't have to defend one moment you take with him.

"A lot of directors don't have that kind of calm. They are always putting the pressure on. But as a second-unit director, he has worked with all the good stunt guys around and he just—well, he just *knows*."

Terry shook our hands, took a piece of tobacco from a pouch, put it in the corner of his mouth, and walked off into the sunset. The next time I saw him he was lying at the side of the pool in Nefta, waving his hand in front of his face and complaining, inconsolably, about flies. "I hate them," he was saying. "Just hate 'em."

Martin Grace and Wendy Leach: Indiana Jones and Marion Ravenwood Without Faces

"You can take a fantastic impact on your back."
—Martin Grace, Stunt Man

Now that you have heard from Terry Leonard, do you want to become a stunt man or stunt woman? Here are two stories about people who wanted to do exactly that, and did.

First there is Martin Grace. He is from Kilkenny, Ireland. He is thirty or so and looks younger. When he was an athletic schoolboy he wanted to get into movies, used to dream about Hollywood. "You know, as most people do," he said with a fine simplicity. "So I pursued it and made it, if you like."

And then there is Wendy Leach, who is in her early twenties. She, too, was an athlete at school, and after an early inclination to become a teacher, she decided she wanted to be in films as a stunt woman. Her father, a stunt man, objected. No matter; she made it.

Through the Elstree filming of *Raiders*, Martin Grace doubled for Harrison Ford and Wendy Leach doubled for Karen Allen. In all of the really dangerous shots, Martin and Wendy *were* Indiana Jones and Marion Ravenwood.

Martin and I talked in the scorching Tunisian heat of

an exceptionally fierce dry day, in circumstances of barren loneliness; hatless, unprotected from heat, thirst, fatigue.

"I came into movies because there is a certain magic about them that I don't think you can find in any other occupation. The places you get to, the travel, anywhere, anytime. You can travel the world, which I practically have, now."

There, but for less-than-perfect coordination, would I have gone—to the high wires and the stair falls. But I didn't, so I lived vicariously now.

"I was pretty good with athletics when I was at school and college. And after school I wanted to carry on with being fit and have a good time as well. And it all came together with stunt work.

"I've worked, for instance, on the last two James Bond films as Roger Moore's double. That was *Moonraker* and *The Spy Who Loved Me*. I also worked on the last Sean Connery Bond, *You Only Live Twice*."

How did Martin Grace end up doing those Bond movies? He started by dropping out of college to go to drama school for a year or so.

"After drama school I wanted very much to be involved in entertainment so I went to Butlins Holiday Camp (famous communal entertainment vacation centers). I liked it very much. I was doing various things: instructing in games; and they had a theater there. That was the beginning.

"I did one or two commercials for television, in those days. I was more flamboyant then, so I was ready for action commercials. I did one for Supersoft hair spray, as a white knight on a white horse. I did Cadbury's chocolates —the man in black. I doubled for the actor, jumping on a train, from there to a car, from the car to the helicopter. Remember them?

"By then, I had left Ireland and was able to get into more technical things in London than when I was in Ireland. I had a yearning to do fencing, to do trampolining and all that, but in Ireland I didn't have all the facilities.

"My basic training I did in a gymnasium in Paddington Street, London, which was run by a man called Rube Martin. He would teach people the basic things, falling, doing karate, trampolining, wall-climbing, and fencing. But it still doesn't make you a complete stunt man. You can never

gain the experience at a school that you gain when you work.

"And when you start working, you obviously are not going to get the big numbers. You are working with stunt men who are experienced. It's a little bit like going back to the mother hens who watch what you are doing. And you watch them."

Martin Grace was now in Actors Equity and on the Stunt Register, the crucial official list on which every stunt man or woman must be if he or she seeks work in the big leagues.

"I would say there are 120 stunt performers. Some of them are probationary members, who are new: it just means that they have served a period of less than two years.

"You have to build up your stunts steadily. I did. Then you learn what's safe and where you have to be careful. There are limitations.

"If you are jumping, say, three feet onto the ground, of course you know it's okay. But if you start going up to sixty or seventy feet to do a high fall, then everything has to be right.

"Your rig's got to be in the right place. You mustn't have any objects sticking out that are going to hit you on the way down because it puts you off course.

"If you go higher still, up to one hundred feet, you have to be careful of winds. If you have very high winds, you can't do the fall.

"Just at the moment you're leaving you might just catch that quick burst of wind that would actually put you off a few degrees. You wouldn't obtain what you set out to do."

(The wonderful gentle understatement of it all. Was it conscious or unconscious? "You wouldn't obtain what you set out to do. . . ." You might also miss the rig and break your spine. Your neck. Die.)

"If you do a high fall onto a very small rig, then you've got to be very exact. I did one in Rhodes this summer on *Escape to Athena*. From a minaret about eighty-five feet up. I did the fall onto a rig that was only eight feet wide and twelve feet long. That's not very big, is it?

"They wanted to have a shot where the 'sniper' got shot out of a minaret and you could see him falling. That was me. And they panned down with him and saw him go

behind a wagon—something the size of a Volkswagen. Since you could see the body going behind this car, you couldn't make a large rig because it would be seen. They put the wagon on its side, put a German soldier 'dead' across it, and I made my rig behind that.

"It was an incredible experience because, as I say, I only had to be a fraction out and I would have missed it. But as it was all calculated, it was all right.

"The whole thing is in your mind and you know before you go up there exactly what's going to happen. You know, you psych yourself to a great degree.

"You don't have any fear whatsoever. It's true: fear's not there. Everybody else, the people around you, are all frightened.

"It's extraordinary, really, because I watched the people and they were all petrified. But I had so much confidence. You walk up the spiral staircase higher and higher, come out the top, and the rig looks like a postage stamp.

"Now you start falling and because the rig is so small and not very high—about five feet from the ground—you cannot just fall any old way; you have to fall in a certain way.

"Once you leave, if your head topples your body will go into a somersault. If you keep your head up and when you are about halfway down arch your back, then you see the rig.

"You are now practically facing the sky. You have to fight to keep your head back. Because if you gave one little tuck of your head, your body would spin. And if your body does go round, you would then maybe finish head down and break your neck.

"Now, the danger area for a young stunt man is that he might tuck that little bit too soon and spin about and land on his legs. You're traveling at maybe forty, fifty miles an hour and if you land on your feet, your legs get stopped by the landing but the rest of your body is still doing fifty miles an hour.

"This is where sometimes they smash their heads into their knees. You can break your neck. This is the reason why you have *got* to go on your back. You can take a fantastic impact on your back."

We discussed other tricks, other secrets. What happens when someone goes over a cliff in a vehicle?

"A stunt man can actually take a car over a cliff in a certain area, if it's not too high. But if it's three hundred feet onto rocks then there's got to be a trick. You can have the stunt man go over the cliff with a camera from behind and then go down to the valley and shoot a car with dummies arriving. Or you can have the bail-out just before the car goes over."

And where a high fall actually ends with a visible impact between an actor and the ground?

"If the director wants the guy to fall fifty feet to concrete—well, that would break bones. So you do a fall from fifty and have a rig, and the director takes three-quarters of the shot. Then he can get another shot in which the guy only falls about five feet."

We had been talking about "rigs" a great deal. What substances were used in fall pads, what worked best?

"Cardboard boxes," said Martin. "They are the original substance for falls of all sorts. But now we've gone into sponge pads. First of all they used just plain sponge rubber sheets. Now they cut sponge into little blocks and they pack it. It gives a very good effect. But it's limiting the height you can go to. The latest gadget is called an airbag—they have them in the United States, and they're certainly very good."

"What do you do to train?"

"If I'm home, not involved with a movie or on location, I run maybe four or five times a week, evenings. I try to get in about eight miles, sometimes ten. On a location like this where it is terribly hot there isn't a lot of oxygen in the air and I cut the runs down.

"And one is involved in a longer day here, getting up early, getting back lateish to the hotel, so you haven't got a lot of time. But I try to run every second day here, maybe do about five miles.

"I'm very careful about eating and drinking. I don't eat to excess, but I'll have the best food available. Drinking is another matter; I mean if you offered me a glass of wine I'd have a glass of wine, but that's as far as it goes. When I'm working and doing a major stunt I don't drink at all. Because if you feel ten percent down that's bad news.

"You want to feel one hundred percent all the time; then you get the best out of your work."

I asked Martin to generalize about the temperament of

stunt men: was there a common characteristic—confidence, the certainty of the extraordinarily high achiever, egotism?

Martin said that there was a common bond of loyalty and, to generalize, there did seem to be a great sense of humor. "Also a certain amount of egotism.

"If I see another stunt man doing a good job, I'll give him credit for it. But you always feel that you want to do *that* job also. To do everything. There's something that pushes stunt people to want to do things, to want to perform.

"So when a job is available your heart feels: 'I'd like to be doing that.' But realistically, you say, 'Well, okay. I'm doing ten, fifteen percent of the work and the other ten or twelve guys are doing the rest.' You can only do so much."

"How did you become involved in *Raiders?* Did your agent recommend it?"

"Excuse me," he said, quickly but with robust pride. "We don't have agents for stunt work. This particular film I took an immediate interest in. For one thing I was going to double for someone I hadn't doubled for before—Harrison Ford. I also foresaw there would be a reasonable amount of action in it. Lots of stunts, really."

One extremely dangerous stunt was the falling statue in the Well of the Souls. A heavy plaster thirty-seven-foot statue falls over with Indiana Jones clinging on, and smashes through a wall to the catacombs beyond.

As the stunt began Martin had drawn spontaneous and sharp applause for a spectacular flying leap in which his only safety net was Indy's bullwhip.

I asked Martin about the statue. What sort of a stunt did that represent?

"That is something I would probably never encounter again, exactly the same as that, and I hadn't met it before. Sometimes you've done something similar so you know what to expect. I've come down on other objects but generally there was something to break the fall.

"There's no rehearsal. You know that the statue's going to hit the ground and there is going to be a solid sort of thump on impact; there is a great possibility that you are going to bang into the statue. So what I had to do was hang underneath from the time the statue started to go.

"Then I got my feet into the stirrups which were on the body part. About a third of the way down I knew I had to

change my grip. I did this so I could get my shoulder underneath the statue's armpit and get my head clear. If I had left my head in front, underneath the armpit, I would have smashed my face.

"Then, I was *there* with the statue on impact. It wasn't a situation where the statue had hit the ground and I was still traveling and I banged into it.

"It could have been a disaster for somebody who didn't realize what this was all about. So much of it was planning, so much of it was responding."

I asked if Harrison Ford could have done much of the stunt himself—excluding the fall, which was very advanced work.

"Harrison is very athletic and the rest would come from experience. It could become very difficult for him in certain situations, but if somebody with experience tells him what to do, it makes it much easier.

"You recall that situation where he was going to swing underneath the armpit of the statue on the whip. Well, he was really restricted with time there. If I had had the time with him he could have done that, but I knew that I could go up and do it myself more quickly. That's the reason they have doubles—a double should be able to get right up there and do the job. Which I did."

At the end of the week, Martin was leaving *Raiders*, his work done.

"I'm off to do the new James Bond," he said, "doubling for Roger Moore again. The Bond films have a great attraction for me. It's the action. I like the style of the action and I love the traveling. Places like here, Africa, Rio, the Far East. I would take three months' work traveling over six months in a studio."

"What are you going to do after Bond?" I asked Martin. He said he was doing fewer movies over the last five years than in the beginning, but more actual *work* in those movies.

He liked to do three a year. *Raiders* had taken three months, Bond would be five. So then . . . who knew? More new places and new people. "Seeing how people live and what the world is like. It's a bonus, isn't it?"

And next year he is going to buy an airbag. "With an airbag you can go up to hundreds of feet. The boxes be-

come a little hard. I would say boxes up about eighty to one hundred feet. My highest fall was about ninety.

"I would have no trouble in my mind in going higher, it's just a matter of the right occasion and the right equipment."

"You seem to be coping," I concluded.

"Oh yes, indeed," he said enthusiastically. "I would say I cope with life. I'm quite sure I cope much better than some. I just let life roll over me, really."

Like Martin Grace, Wendy Leach is always working, moving easily from film to film. However, she has two considerations that he does not have. She has a baby (born in spring 1980); at the beginning of her pregnancy she went over Niagara Falls, but at four and a half months, she had to retire temporarily. She also has a husband, an entrepreneur who speaks four languages and misses her greatly during location absences.

She retraced her career in snappy phrases, abbreviating where possible, occasionally dropping pronouns and verbs. We were among a large group under the umbrellas, during the long Flying Wing sequence out at Sedada, Tozeur.

"I was athletic at school, would rather play hockey than do mathematics. Originally I thought I wanted to be a teacher but the standard of education was dropping anyway and I thought teachers got a bad deal, couldn't discipline their pupils. Weren't allowed to.

"About eight years ago I left school, then worked as a sales rep. I was a member of Equity because I'd been in a TV film when I was about eight, and I kept the card going, so I was able to get on the Stunt Register. 'I know those people,' my father said. He was a stunt man himself, you see, and he didn't want me hanging about with people like him. Still, I did it.

"I was very good at riding. And I like messing about with cars. Have done high falls, sixty, sixty-five feet preferably."

Wendy Leach said she missed her husband and daughter very much. She had been on location, which she did enjoy, for only two weeks, yet she knew that such a *little* girl would have changed in that period. "I have photographs of her all around my hotel room," she said. She was anticipat-

ing a quick break between phases during which she could get home and back in time for the next location in Africa. (She did manage to dash home for a week.)

We talked about her work.

She said she had been Joanna Lumley's double on *The New Avengers*. "I enjoyed that. I was about an inch taller than she, but you don't notice that on TV. I've gone from film to film, actually. I've done all sorts of stunts, but not fire before this film. I would do any stunt if it were possible. Didn't much like snakes, not the snappy ones. Didn't like standing in a thousand or more.

"But you do what you're asked."

She was due, soon, to join Vic Armstrong, she as Marion, he as Indy, running and swerving at great speed and in closest proximity to real danger from the blazing Flying Wing. Vic Armstrong, who had a remarkable resemblance to the leading man, was sharing most of Harrison Ford's remaining stunt work with Terry Leonard.

In her brisk, throwaway manner, Wendy talked about fear. "I don't really feel fear," she said.

I said Martin had said he *never* felt it. "Never?" she said in surprise and thought for a moment. "Well, apprehension maybe. I like excitement. Do get a buzz from it.

"I do like that. That's what makes me do it."

I asked how she kept fit.

"My daily routine is a set of exercises, which I do faithfully. Sit-ups, press-ups, things like that. Have a chinning bar at home and a young horse which drives me mad, trying to school it. Love it. Breaking it in. Wonderful.

"I would like to win the Grand National and I have an awful desire not to have any woman other than me win it first. Sort of pray that no one will get round first."

And in the meantime, here comes makeup, and hairdressing with a Marion wig and so to work—nothing to it, could happen to anyone if she set her mind to it.

Karen Allen: An Old-Fashioned Heroine

"When this movie's over, Karen'll be ruined for life, she'll be so tough."

—Steven Spielberg

Karen Allen is a very nice young woman, direct and amused, not at all "Hollywood," which is unsurprising when you discover she is from the East Coast of the U.S.A. She was born in Illinois, moved to Washington, D.C., as a child, and now lives in New York.

Way back at the beginning of Elstree, in July, she talked buoyantly about her part as Marion Ravenwood and how she was dealing with it: a tough broad in the man's world.

"I think she's not feminine when we first meet her. She's been living in Nepal, traveling with her father, probably spent very little time in the company of women.

"Most of her life has been spent around men, archeologists, professional people at first, and now for the past few years she's been running this bar in Nepal, surrounded by men and almost masquerading as a man to have the toughness to pull the whole thing off.

"But at the same time, any woman who's developed along those lines, in that certain sort of tough 'I-can-take-care-of-myself' way, has another side that is naive, innocent, and very unknowing about life.

"Steven (Spielberg) was very helpful about the part. We spent a lot of time talking in the beginning, because when

I first read the script there seemed to be some inconsistencies in the character that I needed to get clear. So we sat down and went through it piece by piece and he then went to the writer and they had conversations. Changes begin to take place almost immediately when a certain person is cast in a role.

"I felt it was going to be an enormous challenge because I've never done this style of film, or this kind of stylized acting in film. Anytime you put someone in with snakes and skeletons and have people falling down cliffs, you're working in another whole area.

"I've come from a more realistic type of film and theater background. In theater I used to play tough, disturbed youngsters, so the interior of someone like that is not totally new to me. Yet at the same time I think it's the *scope* of the film more than anything else that challenges.

"For instance, I've never really been around snakes very much. I've grown fond of them except for the poisonous ones, the ones that really bite. It's odd being so physically unprotected, I think, in all of those scenes. It works well for me physically and at the same time—Harrison (as Indy) has his big boots and his big gloves and his leather clothes and stuff and I have naked arms, nothing on my legs, and bare feet.

"In the beginning that was tougher than it is now because I just couldn't bear to have the snakes on my feet. But I've gotten used to them and I have to keep reminding myself that they are—well, snakes."

Karen began to talk about the bar scenes, which she thought would be difficult, but stimulating.

"The Raven is going to be very complex stuff to shoot. To me it's the most exciting scene because there's a lot of real acting going on in there and dialogue between the characters—a lot of the beginning pieces in the story develop and unfold in those scenes.

"But then there are also the complicated action sequences with the fight and the fire, which should be pretty tricky to do.

"However, the Raven is a wonderful establishing scene, a great introduction to a character, from the very first moment you see Marion in the bar. I think the difficulty is continuing that character line through the rest of what's going on. Because she then leaves the world of the Raven

in which she's queen, drinking men under the table, throwing people out, running the show and basically doing what she wants to do.

"And all of a sudden, she finds herself in a situation where other people are controlling her and that basically continues throughout the film.

"It's one thing to sit down and look at something on paper and develop the character. It's another thing to get it down on film.

"The disadvantage you have in a film as opposed to the theater is that you don't have that rehearsal period where things solidify and you get to know the character because you've lived it every day.

"And there's always disappointment when you begin with an end sequence of something and a month later you have grown to know the character so well that you realize maybe something you did in the very beginning could have been different.

"You'll see it in a whole new light, but by that time there's no possibility of allowing the knowledge that you've gained in the last month to reach some of the earlier stuff. In theater, of course, everything is done piece by piece and you build layer on layer on layer.

"It's a horse of a different color, isn't it?"

The Raven scenes were filmed to everyone's satisfaction and delight. Karen herself enjoyed the filming, and her performance was much praised by Steven. "That's great, Karen," he could be heard saying repeatedly at the dailies. "Just great. Real good."

I met her after the final day in the Raven, hanging out at the Asteroids machine in Steven's office. She was still dressed in rugged "Nepalese bar" style, which, God knows, is an imagination-stretcher: baggy wool trousers with pockets, soft blouse and scarf, strong leather belt and sensible shoes.

She said she would miss the Raven bar, now burned down, and would miss, too, the clothes for the sequence: "They have been so comfortable, so easy." The desert location ahead would call for the strange white cocktail dress with a tulle bunny tail, as designed (in the plot) by the villain Belloq for no honorable reason that I could see. In terms of a motion picture in color set in the brown desert with brown Indiana Jones and brown Arabs, the visual

appeal of a raven-haired heroine in a white gown was obvious.

Karen Allen established herself as a terrific team player during the grueling Elstree phase of *Raiders;* professional, unassuming, cheery, pretty, and democratic, she became a well-liked and ubiquitous member of a tight-knit unit.

On the first Sunday in North Africa, by the side of the pool at the Sahara Palace Hotel in Nefta, she sat among a mixed group of actors, crew, crew's wives, sun worshippers all, fresh out of a rainy English summer, crazed for a tan.

"Has your relationship with Steven changed?" I asked.

"Yes," she replied, "I think it has. From the beginning I knew pretty quickly that I would work well with him because the screen tests took two or three hours, I guess. Each of them. And just in the course of doing the tests we really got somewhere putting our heads together with the character, finding ways to put dimensions into it; which was wonderful."

"Was it important to you to get the part—really important?" I asked.

Karen said that at the time she was working on another project and she really didn't like to think about the next one. "I like to concentrate on the one I am working on; I don't know how I would have felt if I hadn't been working. Then *Raiders* might have taken on more importance.

"I was really interested in the part but I wasn't waiting for a phone call. I was really involved in something else. I was working every day, about twelve or thirteen hours a day, so that did put a different perspective on it. I hadn't read the screenplay so I was going on a small amount of information plus a lot of admiration for Steven's work."

The part came to Karen Allen and, as she said, they worked at it, established a friendship, and then the film began and all the weight of directorship accumulated and inevitably communication had to be balanced with available time and space.

"Steven gets caught up in the excitement of the scene and he'll tell me, 'Oh, that's wonderful,' but he'll rarely follow that up," said Karen. "You work with all different kinds of people, of course, and some of them continuously let you know that you are doing real well. Other times, you are so in the dark when you are making a film.

"With Steven it's a matter of catching him at the right time and really pinning him down to get him to talk to you at length about something. Because when you're on the set he's busy, there are so many things. He's not always available, and often preoccupied.

"The set is the place to talk about little things. A change in wording of a line, things like that; but any real problem I'm having with a scene, something I really know needs to be written, or something that needs a sense of direction—I really have to catch him on a Sunday and just say: 'Look, can we talk for an hour, so that I can prepare for such-and-such a scene.'

"Some directors work almost solely with the actors. Their cinematographers and other people advise them on other matters, but these directors leave the crew pretty much on their own.

"Steven has such an enormous visual sense of what he wants that he is involved on all levels at once. I think it is very difficult to make any sort of major decision without his being there and being involved on all levels."

Two weeks later I am at the poolside again, but this day Karen is inside playing chess and Steven is talking about her, and about the director's attempts to understand what an actor or actress needs.

"Karen's not tough inside. But when this movie's over Karen'll be ruined for life, she'll be so tough. It's tattooed on her now. She may never be rid of it. Before this movie ruined her for life, Karen was not a muscle-mouth. But she had to become one for Marion: tough and brittle on the outside while vulnerable and gushy on the inside. The soft and mushy side was coming out too much so Karen has, by design, intellectual design, by trying very hard and wanting to, become a real hard case.

"Now she has caught on beautifully, and she's playing this lady in between puffs of cigarette smoke, and pushing the hair out of her eyes. Appropriately, she's being hard on herself.

"See, Karen is essentially a stage actress and she's a close-up actress, meaning that she works very well in small films where her character is the reason the film is being made.

"She's having a time adjusting, but she has great instincts and she's very good about delivering."

August 30, 1980, poolside, Nefta. Karen is not talking now about Steven but about her own, rather varied past. Happy child, unhappy adolescent, we have established; daughter of farming folk—at least they both grew up on farms: "Generations and generations of farmers on each side. So it never crossed my mind that I might ever want to do anything like act until I was about twenty years old.

"It certainly didn't cross my family's minds and they didn't like the idea particularly."

And now?

"They are very pleased with everything. They visited the set for one day and loved it, then they took off and went up to Scotland."

Going back a little, into Karen's late adolescence, we find her in Washington, D.C., in college, studying literature. "Literature for the most part," she said. "Psychology a little bit. I was interested in children and at one time I thought I wanted to teach children. I had worked with retarded children for three summers when I was a teenager, and I liked that quite a bit. And I also baby-sat for a child genius who really fascinated me.

"After these experiences I had become interested in the possibility of working with one or the other: exceptionally bright or exceptionally difficult. A teaching challenge.

"And then I saw a performance by a group of actors and they were just wonderful. It was the first time that I had ever seen a theater performance with really really terrific actors and they just stunned me.

"I had taken a trip to Philadelphia from Washington specifically to see them because people said no matter what, I should see this performance. It was going to be the experience of a lifetime. And it was."

Karen said there is no doubt that it changed her life.

"At the time I was working with a cooperative writing group and we met once a week to read each other things we had been working on. And they had a little press that they published books on once or twice a year. But then I slowly stopped working with them and started working with the theater company, just studying. Eventually they started to give me little parts in the plays they were doing."

It was, said Karen, a case of slowly falling in love with something. The more she did it, the more she wanted to continue doing it. "Of course it came to the point where, if I was going to keep on acting, I had to find a way of making a living out of it."

Actors and Their Lives; the Production Office, Evening

"Any movie with a monkey giving the Nazi salute can't be all bad."

—Paul Freeman

Ron Lacey and I became friends down by the pool at Nefta. I introduced myself, as Harrison Ford had said I should ("Great guy, great actor," he had said, months earlier). I had observed the affection and respect in which this great English character actor (with the gentle tongue and winning smile across his moon face) was held by crew and hierarchy alike.

Early in August, at the edge of the Raven Bar set on stage two, Steven had spotted him and apologized for keeping him waiting. "I'm not impatient, Steven," said Ron. "Just wanted to see how you were getting on."

"Well, you should be impatient," replied Steven. "I'll be getting to you very soon. We have kept you too long."

So much for the movie brat. So much for the star villain. Two men with but a single aim: to get on with it. No clash of egos here.

There was little for Steven to do to direct Ron Lacey. He was an old hand in front of cameras of all sorts. Steven recognized that the script was a pushover for the seasoned villain: "Americans, you are all alike, Fraülein Ravenwood.

I'll show you what I'm used to. . . ." So Ron, playing the Nazi Toht, speaks to Marion. In his hand is a glowing poker.

Ron could play this in his sleep, but didn't. He has a reputation for punctilious attention to every part and he's had some great ones. Steven kept Ron physically on his marks and marveled at the width of the actor's range.

Later I asked Ron Lacey about Steven Spielberg, as a director of actors: "Of course with the script for *Raiders* he and I knew that there was one way of playing it, so I played it that way. But there's no doubt he'd be very, very good if there was *work* to be done with lines. I did enjoy working with him very much." It was a pleasure to see them together.

Ron Lacey was a joy to have around the location. He enjoined everyone to make the best of things, collected fossils when he had nothing to do between setups, plotted to begin so many projects when *Raiders* finished that you wondered whether there were years enough ahead.

He first made his name in Wesker's *Chips With Everything* at the Vaudeville Theatre in London in 1962. In the late '70s he performed a major tour de force as Dylan Thomas in a striking two-hour BBC-TV production of the poet's life.

Between setups we talked for hours on end, and when he wasn't talking to me, he was talking to someone else—Karen Allen for example, to whom he was a great friend and an uncle figure, though he scarcely looks older than thirty.

The most handsome man in the world turned out to be as good as his face: Paul Freeman, who played Belloq. "His eyes hypnotic, his smile charming, yet lethal. His heavily French-accented speech is deep, mellifluous, wonderful . . ." says the script.

And so he was—deep, mellifluous, wonderful. "The dirtiest dame ever to play Crewe," it had been said of him, he told me with perverse pride. In case you should fall at the language barrier and misunderstand that, let me explain that in Britain, "dirty" means "vulgar in speech," "dame" is a heterosexual "drag" act in pantomime, and

Crewe is a railroad terminus town in the North of England, not far from Liverpool.

Paul Freeman, recently in *The Dogs of War* and a great British-made gangster film, *The Long Good Friday*, was once an advertising man ("hated it"), then a trainee teacher ("liked that"), a drama teacher, and an actor in repertory.

The casting department came up with a terrific bunch of villains. Paul played the classic "heavy" with a heart of gold and a tendency to let his judgment be distorted when it came to dispatching the heroine. Where Dietrich, his boss, played by the excellent and really German Wolf Kahler, would have no qualms about killing Marion, Belloq couldn't quite bring himself to pass up the chance to—well, you never know. A pity to waste her.

Paul said he was enjoying films, wanted to do more and find out what it was all about. Pantomime, he said, would be very nice as an antidote to the smooth, impossibly handsome Belloq.

He said that what had attracted him to the film was that it featured a small monkey who gave the Nazi salute. "Any film with *that* in it can't be all bad," he said with a beautiful smile.

The production office is a hell of a place in the evening. I am out in the desert during the day so I don't know what it's like then—but at night—we are passing through trauma in the production office.

Rita Wakely of wardrobe is with an assistant, Tunisian, feminine, at the sewing machines. Tarak Ben Ammar is talking on one of the phones in various languages, none of them English. The Tunisian crew are nice people. They are on one side of the room, very busy, typing. Pat Carr is talking on the phone quietly. Lamps hang over the tables. There are green shades on the lights on the ceiling. Red trunks and cardboard boxes on the floor and, among everything else, machines for duplicating, typewriters, maps and then rugs on the walls.

About fifteen people here, plus David Wiesniewitz and me. Norman Reynolds is back from Sousse, where he has been preparing the sets for the final North African leg of production. He is talking to Steven about the Cairo street

scene and bazaar. Rita says there are a hundred German uniforms; they have to be repaired constantly. They also need six holsters, she tells an aide. They must get to the first unit.

It is time for dinner, or a cappuccino at the bar.

Roy Charman: The Story of a Proud British Technician

"Steven Spielberg is what this industry has needed for years. He and all of the so-called movie brats."

—Roy Charman

Roy Charman did production sound on *Raiders*. A very experienced man. A heart-of-oak British film technician who left formal education during World War II, aged fourteen, Roy worked for a publishing company for a pittance, served in the Royal Air Force as an electrician, then worked his way up in the film industry to become a senior man in his field, with impressive credits from many great studios.

Since 1964, when he reached seniority, he has worked on more than two dozen films, doing sound for such directors as John Frankenheimer, Blake Edwards, John Schlesinger, Richard Lester (five films), John Milius, Richard Fleischer, Edward Dmytryk.

Twice nominated for Academy Awards *(Superman I* and *The Wind and the Lion)*, Roy Charman won one for *Grand Prix*, MGM's 1966 paean to the racing car; not, for sure, an easy film for a sound mixer.

Nor, with its wind machines, explosions, blizzards, quietly spoken leading players, and noisy death traps, was *Raiders of the Lost Ark* easy. Throughout our many conversations, the recurrent theme in Roy's frank exposition of the role of sound and sound people in motion pictures

was the proposition that sound had become subordinate to other factors: budget, speed, effects, visuals—almost anything in fact.

For all that, Roy Charman enjoys his work. He is reliable as a rock, terrifically organized, and disciplined. He is also unashamedly romantic and considers himself to have had a wonderful life as film technician and as a family man.

He is full of views, not all of them polite. On the subject of directors, however, he is very positive and does not believe there are bad ones. "There can't be bad directors. I think anybody who has got to the position of director of a film of any importance must be considered a bankable director; just as there are bankable actors and actresses." There can be bad directors to work with, but that does not apply to this film.

"Anyway, Steven Spielberg is a very bright young man. He makes things up as he goes along. He shoots off the cuff, from the hip. He gets what he wants from his crew, so he's successful. He's what this industry has needed for years. He and all of the so-called movie brats. I mean, they're basically moviemakers. When I came into this industry in the early 1950s, there were very good filmmakers. Then we went through a phase where money men came in and they were primarily interested in what they were going to get at the end of a film, not with making really entertaining films.

"Ninety-nine out of every hundred technicians are keen to make pictures. That's why we are in the industry. We are not interested in what we are getting out of it. We do like making pictures and get real enjoyment out of it. So it's a real ray of hope for the industry that these people, Steven and George Lucas and John Milius and company, came along and feel the same way we do.

"They want to make films. As I said, some of them are easy to work with and some of them are difficult to work with. But basically they are filmmakers; and it really is a pleasure to work with them all because you know that at the end of the day you are going to have a good film. Something you are proud to have worked on. And that didn't happen ten years ago. We were just churning out films for the sake of churning them out.

"Nowadays, too, there are those who just get everything

in the can and get it out on television. And then it's on television for ever and ever amen. That's a bad step for the industry. I don't know how the Spielbergs and Lucases are going to combat that sort of thing. But they have to."

Roy Charman and I discussed his early years. "I wanted to get into newspapers, journalism, advertising; my first job was as an office boy at Odham's Press Ltd. and then with Fairchild Publications."

Roy became an electrician's mate after serving in the Air Force, where he had learned similar work. Then, on the advice of "one of the nicest, most intelligent men I ever met," a Communist agitator barred from film studios, Roy got out of the job he was doing and tried the studios. Roy recalls, "I took his advice and went to MGM (in London) in June 1955, to work in special effects.

"Tommy Howard was the head of the department and I worked for a fellow named Freddie Hellenbern."

He stayed at MGM through a number of films, then moved on to work as an assistant for the sound department at the great Pinewood Studios.

"Discipline and rules were very important then. It was very different. When the first assistant said 'Red light,' it was really a cardinal sin to talk. You just did not do it. I don't know why discipline has wavered somewhat, but it's made working conditions easier somehow. These things don't show in the final product; it just makes life easier when you're working.

"In England and Hollywood both, discipline was total. Nobody—the director, the artists, nobody—was allowed to add dialogue to the script or take dialogue away or to add scenes. Nobody except the top brass. The really top people who ran the studios."

How did Roy come to work on *Raiders?*

"I really wanted to work with Steven Spielberg after *Jaws* picked up the Academy Award for sound when we were nominated for *The Wind and the Lion.* I was just fascinated to see how the man directed. So I wanted to work with him more than anything else."

We talked about sound, in general, in films.

"I have been very fortunate in my working life. When I was learning it was not as easy as it is now, with the equipment for instance. They didn't have the sophisticated equipment we get to use now. It is one-hundred-percent

better than it was only ten years ago. But the men who were teaching us years ago, the Dudley Messengers and John Mitchells, were very, very good sound men.

"Since I've been the chief, which is since 1964, I've used only three boom operators. They were Don Warden, Mike Tucker, and Johnny Salter—four including George Rice, who is really my engineer.

"Without them I wouldn't do a film. No matter how good I am, if the microphone isn't in the right position I'm not going to get usable sound whatever the conditions are.

"I really think I've got the best men in the business. I mean that with no disrespect to others whom I have worked with. But these men have done me proud. They have been responsible for the luck I've had within the industry.

"Sound is sometimes taken for granted. You get used to working with people, the same people, and then there is a change of location and you can't take the full team with you. In my case, I can't take John Salter with me to Hawaii. I'm sad, but it is something we have to live with. George will come with me and John will not. It was decided between the two of them. I said I didn't care which of the two of them it was and I think they drew straws or saw who could down the most pints of beer. It is a shame."

One theme of greater weight did keep recurring in our long conversations and that was Roy's feeling that sound is being neglected in films these days.

"I have now worked," said Roy, "with many of the younger moviemakers, and as I've said, I think they are sincere moviemakers who are good for our industry. But I don't think they have an appreciation of sound and what it can bring to a picture.

"Just before we came out here I saw Al Pacino in *Serpico* on television and didn't understand half the dialogue. I really think that is unforgivable. If you went to the library and took out a book which had two or three of the pages missing, pages that had a bearing on the story, you would complain to the library.

"But the new filmmakers don't appear to be aware of sound and they are just not that interested in it. Although I know George Lucas has been quoted as saying that he is very pro sound and I know that Steven is said to have the

same interest. Well, they don't seem to be very aware and interested *at the time*.

"I do think sound is very very important. I mean if you sent *Raiders of the Lost Ark* out to the circuits and said, 'I'm sorry but I haven't got any sound but here's the picture,' no one would go out to see it. But at the same time if you said, 'We have a beautiful sound track and it is a lovely story'—like people listened to on radio for years and years—you would probably get more people to go to listen. Probably more people would go to listen to a sound track than would go to see a picture without sound.

"It is hard to get through to a producer or a director when you say, 'Can I loop this line?' They say, 'No, no, we will do it later, we will do it tomorrow or we'll do it the day after that.' And the next day never really occurs for a sound man. Because when next you ask the question, they say, 'We'll loop it in postproduction.' To me that is penny wise, pound foolish because they'll have to send for the actor months later to get something they could have got within half an hour on the spot.

"It's really a cardinal sin to shoot a picture that's going to be ninety-percent looped, but what a lot of directors or even producers don't want to do is to *wait* a little to get good sound.

"And when it comes to looping, they still do not give sound the same consideration they will give cameramen. So you get a bad job. You let lines through that have no right to go through; when they are unintelligible they should not be allowed. Or you get something which is out of synch because it looks good. Let it go, they say. They forget they have read the script a dozen times. The public only gets to see it once."

Big Bangs and Scarlet Fireballs: The Kit West Story

"Film and more of it, that's the way to learn."
—Kit West, Mechanical Effects Supervisor

Kit West is a tough guy, no doubt about that. He loves big bangs and war films and looks alive with fire and enthusiasm, a great bear with a bold brown beard and a strong brave paunch. Busy enough at Elstree with the flying darts of the temple, the gunfights and fire of the Raven bar, and numerous other delicately timed examples of the special-effects man's skills, he really came into his own in the desert—in the baking brutal terrain in which his life in filmmaking has made him an old hand, an expert.

"I love the industry," he said, as we talked in the wake of the day of the biggest bangs—the day he blew up the Flying Wing, the tower, and God knows what else. Tires, huts, petrol cans—the air was gritty and acrid with Kit Westery. That was why he was there.

"I love it very much and in fact I've never done anything else. I came out of school and became an assistant cameraman and I am still in films—touch wood. I consider myself very lucky, extremely lucky, and I haven't had any great spells out of work.

"Really, I prefer to do war pictures and lots of bangs and explosions. I am not saying it is any easier, but it is altogether more satisfying when you see the result on the screen. Some of the times that we spend, maybe months,

rigging some special tiny little gag and when the audience sees it, they don't even realize it was a special effect."

Back at Elstree, the first, or almost the first, special effect is the "whizzing of tiny darts" from holes in the South American temple's sanctuary. That was one of the fussy effects in the interiors. Couldn't these darts have been added by the men of ILM, I wondered.

"I know we always had the facility, the backup facility, of being able to print optical effects over the print," Kit said, "but I don't think it would have had the same feeling if we had not had some projectiles going across. That does give it impact; so I wanted to talk them out of saying: 'Forget all the arrows, Indy can just run through the temple and we'll put them on afterward.' Well, first, I used to do photographic special effects, so *I* would know immediately when I saw the movie that the arrows were added, printed in. Anyway, I wanted to have a go at doing them mechanically, because that is what I am paid to do on this picture.

"Also with the arrows there, Harrison really was dodging them. I think he repaid the expense and effort in giving that sort of reaction.

"It was a tough one with the arrows whizzing out of the holes; a couple bounced off his arm, but they were rubber-tipped, of course."

It was a terrific special effect and even if you were an observer on the set, not supposed to be blinded by illusions, aware of the trickery and sleight of hand, the feeling of menace was greatly enhanced by the real arrows.

Remembering the Raven "fires" and also the real fire that had destroyed the huge stage three during *The Shining*, I asked Kit how he handled the Raven scenes. Presumably he had worked from the outset with Norman Reynolds, production designer.

"Oh yes. We had to have certain sections built in the design for concealed pipes. And we needed a concrete floor, and because there had been a big blaze on a previous picture the studio naturally was very, very anxious to avoid another. So right from scratch we had to make sure the materials were presoaked in special fire-retardant solution.

"Mainly the effects were gas, because we just couldn't risk using fuel. When you start using fuel it's uncontrollable."

"Out here in the desert, what do you do to keep actors and crew out of danger when the explosions happen? Do you decide where they're to be, or does the director?"

"The director always wants his artists or stunt doubles to look as though they are as near as possible," Kit said. "On a case like this where large chunks of metal are flying about, I had to give a definite safety line and I wasn't going to blow any of this until everyone was outside the perimeter. The decision has to be mine. Sometimes it leads to arguments. Not with Steven. But some directors are a little more free with their risks than others.

"Without naming names there are definitely some directors who—while not risking their main artist—tend to say: 'That's what the stunt people are paid for—to take risks.' But when it comes to explosions, I don't want a life on my hands."

While we were talking in the desert we moved across to a large truck, which was, in fact, a remarkable traveling workshop. I asked Kit if he had built all the cabinets in the truck for this trip.

He said that he had three carpenters, one from the carpentry department, one from electrical, and one from rigging; together they prepared trucks like this one: fully equipped and with every contingency covered. One of Kit's assistants told us that this truck was the third built of this proportion. There had been bigger: "We built one inside a forty-foot container that went on a ship, then lifted it off the ship, put it on a truck, and took it straight to the location."

When there was a cry for a solution to a problem, did it come to him and the people in his department?

"If they can't put it down to any other department and they can't work it out in its proper department, people will say: 'Well, we've got a special-effects department. They'll sort it out.'

"Then you do sort it out. If you're doing smoke you get all covered in black smoke if you have taken advantage of tires, because they are very cheap to use. They cost about two pennies each, whereas if you had to produce the same quantity of smoke using proper 'smoke pots,' you'd run, say, ten dollars for three to four minutes burning. So, you save a great deal by using tires; and they do work beautifully for black background smoke.

"*But*, if by sorting out the situation, improvising, and saving money, you've brought a skyful of sooty stuff coming down on people, eventually their clothes are ruined and they get very upset. So, it's a thankless task sometimes, special effects." He warmed to his theme. "Like sandstorms. Now with those, you always have to do them with almost treble the amount of sand you think necessary because the camera really cuts through it. When a person is standing in it, his eyes are down, hooded, somehow shielded, squinting. You think that the image you see is what the camera is picking up. But it isn't. The camera, that old impartial lens, is looking straight through the sand, picking up anything and everything it can see—unblinking. So with sandstorms, and with rain, too, you really have to pile it on before it becomes effective. Knowing this all comes from experience. There is no other school. Film and more of it, that's the way to learn. My first sandstorm was in a North African war picture, I remember. And I had four or five big gasoline wind machines like the ones we have here and I was putting dust through. The cameraman was using a long-focus lens and the director said, 'That's too thick, Kit, much too thick. We can't even see the artist.' About four days later we saw the rushes and it didn't look as if there were any sand there at all. It was clear as a bell. They said, 'All right, we'll matte on sand,' which looks terrible. Matted rain and matted sand is terrible.

"So we did it again and we put in about four times the amount and the actors really looked as if they were coming in and out of a sandstorm.

"From that one experience I tend to have those arguments with cameramen (not Dougie here), specially over smoke and sand and rain. They say, 'Much too much, Kit.' And nine times out of ten the director wants more. Then you're piggy in the middle. You have got to play it gently, and try to give the director what he wants and the cameraman what *he* wants."

"Every department will have its ideal director, not by name, but by attitude. What is a good director for you in your work?" I asked.

"A good director for me? It's somebody who sticks to his decision. When he says: 'When we blow up this plane the camera will be on this side, the actor will walk in here

and I will see *that* amount of picture, left limits and right limits,' that's what he does.

"When they say, 'No, no, we have changed our minds and we want to move the camera round to the other side,' after you've got everything set, that's bad. With the camera set according to the original plan, all the gadgetry and equipment that are required are all placed so they can't be seen. In any form of effect, down to shooting something away with a gun and having it fly up, the director will say, 'On this shot I am over the man's shoulder.' I would then rig it so that the thing wouldn't fly straight into his face, so it could be seen better. It's no good coming round at the last moment and saying, 'We've decided to change the camera angle,' because it might take maybe a day or two to actually devise some method to get the thing to fly in a given direction. You can't change a thing without spending time. And time's money. So you have to be honest with them and say: 'If you do want to make that change, I can't give it to you right away. I can re-rig it by tomorrow.' And that is often the deciding factor. Then they'll often say, 'All right, then we will go the way we'd planned.' "

David and Phil of the documentary crew were keen to talk about squibs, the remote-controlled explosive charges that make believable the films in which people get shot at and things are blown up—it's squibs that bring us to our feet in astonishment and fright.

Kit took us through his collection. The ones for "blood hits" behind a shirt are taped onto a plate under the shirt with a "blood" bag taped over that and a wire down the leg. When a button is pressed the charge blows back onto the plate, forward through the blood bag, and out through the shirt.

Nice?

Next was what Kit described as "a meaty little job" that could punch up earth about two or three feet high as if machine-gun bullets were ripping into it. There was also its little brother for a softer effect. These are attached to soft bricks, covered with plasticine, and disguised with dust. They are useful if an actor's face is close when the "bullet" hit—not as much dust is thrown off.

Kit showed us several other squibs of various strengths. His descriptions of them were disarming: this "little blighter," that "big fellow," and those "funny chaps"—that

simulate bullet holes in fast cars, ricochet off metal, splinter wood. All the old friends we have come to expect in our films. It *is* a pact: Kit knows how to give us what we expect. And we don't expect to be able to see the joins.

With him, we don't.

On the morning of the explosions within and around the Flying Wing, there was a great deal to do. More than I dared to imagine. And things weren't going well for the hour or so before the Big Bang. Steven was concerned about the light, and, therefore, the time. Snags were delaying things for Kit: the explosive connections had to be dealt with, to be absolutely sure. Kit was a master of tact and cool, talking quietly and patiently to his men through the radio on his belt and to Steven in person. Those terrible moments when nothing can be rushed and it's close to too late. But just in time, everything was okay.

And when the bangs came—well, they were quite big enough and if the Wing wasn't thoroughly destroyed, it was close enough.

That was more or less it for Kit. Next day, he was away to Kairouan, where there was a big bullet-hit sequence to set up and where a periscope had to be rigged to travel under water, or rather just above water, so that Harrison Ford could ride it on his submarine escape. It would probably have to be done with rails.

"Steven knows about these things," said Kit. "He will have had rails on *Jaws*, I'm sure. We did think of putting the periscope on the side of a boat, but it turned out that that wouldn't work because the periscope would then bob up and down slightly while, really, a periscope cuts through."

Would you have thought of that?

I wouldn't.

Would you have noticed it?

Yes.

And that's why we have Kit Wests.

Douglas Slocombe:
A Great Man of Photography

"America was the real home of movies. Always has been."

—Douglas Slocombe, Director of Photography

"I think that on the whole, every director has to choose a cameraman and let the cameraman do his own thing. That's the only way it can be done." Thus the gentle, silver-haired director of photography on *Raiders*, Douglas Slocombe. His many credits include *Kind Hearts and Coronets*, *The Lavender Hill Mob*, *The Man in the White Suit*, *The Titfield Thunderbolt*, *The L-Shaped Room*, *The Blue Max*, *The Fearless Vampire Killers*, *The Lion in Winter*, and *Julia*. Slocombe has had a long working life with no letup, no fallow period, and absolutely no lowering of standards.

His British films of the 1940s and 1950s evoke a style and a memory of a better, braver, kindlier, more charming and optimistic Britain. I am thinking particularly of the Ealing comedies (the generic name—derived from the suburban London studios where they were made—applied to those first four films). Those postwar films owe much to Douglas Slocombe: it was his cinematography which, as much as anything, gave the films the luminous texture of a hopeful time now long gone and, maybe, of a time that never really was, except on the screen.

Dougie (to all on and around the set and in the indus-

try) lives in the present and is protected from nostalgia by an imperfect memory. Yet his own firsthand sense of the 1930s cannot but have helped to set the mood in *Raiders*, a film which, for the most part, is so much the creature of young men born after World War II. "Dougie is such a gentleman, such a scholar and poet, I can't yell at him like I yell at everyone else. He never does anything wrong." So said Steven to George Lucas and a group of us between setups near the Flying Wing.

Later, when shooting in North Africa was almost over, David Wisniewitz and I were talking to Steven about Dougie. David asked Steven how he came to work with him. "Did you see his films and like them?"

Steven said he had, yes. He had seen many of them and that had led them to work together on *Close Encounters of the Third Kind* for the Bombay sequences. "Dougie shot that Indian sequence. I met him and Chic (Waterson, camera operator), Robin (Vidgeon, assistant cameraman), and the whole gang of us all flew to Bombay from London, shot for a week, and then came back."

As one cameraman about another, David asked Steven if he had run across many directors of photography who didn't use a light meter at all, for that was the case with Dougie.

Steven said he had not had the experience at all until meeting Dougie. In that case, David wondered, had it made Steven nervous?

"No, it didn't make me nervous because I knew a long time ago that he didn't use the meter. He never used it on location because no cameraman will ever use the meter outside. It is just inside that they use meters. I worked with one guy who used those spot meters that spot down on the face, the trees, and the sky.

"He made strange complicated calculations with the spot meter all the time, and it made me crazy because all you would hear is, 'Aaaahhhh, aaahhh.' That's the sound it makes when you take it from a light to a dark area."

It's clear that Steven shared Dougie's evaluation of the relationship of director of the movie and director of photography. Producer lets director get on with it, so director lets cameraman get on with it.

There was no time at Elstree or in Tunisia for Dougie and me to talk about anything except the price of fish, etc.

As he said later, he became personally involved in all sorts of little details on the set. "That's why you haven't been able to catch me on the floor. I really am kept busy all the time and it keeps me young."

However, when the first unit was all but wrapped in Hawaii in October, David sat with Dougie with a tape running and David kindly allowed me to print their talk.

Dougie began by saying that approaching a setup, there were three things to consider: "What are they trying to say with this particular image? What went before—because that led us here. And third, what goes afterward?

"I always think that, photographically, one really wants to know with every single image, what are you trying to say? Where does it come in the picture? Is it a dramatic moment, is it a moody moment, is it an amusing moment, is it a lighthearted moment—things like that.

"And if you're in exteriors, are you trying to play against the exteriors, say a very beautiful glade—are you going to go with the mood of the glade, or are you going to use the glade to counterpoint something?"

David suggested that in *Raiders,* Dougie had chosen a very hard image. Dougie tended to agree.

"Yes, on the whole, a fairly strongly lit picture. Let's put it that way. A countercontrast, I thought it would be. The picture, as you know, is very much an action picture . . . all sorts of things are happening, mostly outrageous. And in a way I would have liked to do outrageous photography to go with it, but really I don't see that that would have helped.

"But I think one does try to make it as strong as possible. I think Steven wanted to do that."

"Does Steven say what he wants?"

"He is awfully good at describing things he likes as well as the things he doesn't like. He often said he liked mobile people in shadow against a light background. And I was able to help him to get what he wanted . . . in some ways I would have liked to do more. But I wanted to try to go with semidramatic effects."

"What's the best way for a director to describe to his cameraman what he likes?"

"I think that directors can show these things in loose terms by referring to the look of a film that they like; they can bring to mind certain shots.

"But it's very difficult to describe a picture and all the nuances in it. And on the floor, a cameraman is dealing with perhaps a hundred lights doing a hundred different little dots all over the screen and obviously they have to be designed to his conception. But I think you can have an understanding with the director.

"Steven has a very good way . . . a very good memory actually for shots you've taken. He describes to me in detail a lot of my shots that I had completely forgotten. I must say I forget things very easily. Often, if I see an older picture of mine on television, I am amazed at all the things I've completely forgotten."

Dougie Slocombe said that nearly all his life he had had to work fast, whether on low-, medium- or high-budget films. For all of those films, in all of those budget brackets, there had been a need for speed. "I must have done more than one hundred pictures by now. A lot of those, in the early days, the days of Ealing Studios, movies were done on about a nine- or ten-week schedule. The budget was (it sounds ridiculous these days) something like ninety or a hundred thousand pounds.

"Now I'm talking about thirty years ago, but that was cheap even for those days; and with those schedules we had to shoot with almost any type of weather. Even then we had to scrape the best out of the English weather, which as you know is very inclement.

"So that gave us a great training in how to cheat the weather and make things look good. And we got geared to going fast. Then as the years went by and Ealing Studios folded up, I kept hoping that with the bigger-budget films I would get lots of time to do fine details."

He hoped in vain on *Raiders*, for Steven Spielberg, belying his (largely unearned) reputation for overrunning, had actually underrun by a couple of weeks.

So Dougie Slocombe became the only man with a canvas seat on the set who never—and that means *never*—sat in it. In my two months with the film the only time I ever saw him seated was at mealtimes or on the plane to this place or that. He was always looking for ways to save time.

"Sometimes in between takes or even during the take, I make final adjustments I haven't had the time to make beforehand; this drives some directors crazy. George Cukor

always used to go mad when I did things like that, but it is the only way I've found I can hand things over fast.

"I regret seeing shots go on the cutting-room floor because of the speed at which one's going. And I always wished that I could have a bit more time to correct while those shots are being done, to do . . . you know . . . just the little fine details."

Dougie thought that his trying to move quickly had led him into a desire to simplify.

"I always light it the very simple way. I always light with soft light. In a room, I try to give the feeling of lighting from a window. If there's a room with just one candle in it, I'd always try to give the effect that all the light is coming from that one candle. If there are a few lights in the room I try to accent."

Speaking of specifics on the floor, Dougie went on to say: "Of course, on a setup, I get the electricians to work as quickly as I can. I don't normally put in hundreds and hundreds and hundreds of lights. We try to go for a few good ones."

"Do you ever feel unhappy about your shots?"

"Well, there *are* a lot of bad ones. However, I always thought I'd rather do one terrifically complicated take that makes great demands on all of us, including myself, than do half a dozen smaller shots, some of which may fall by the wayside."

David said he had noticed, in watching Dougie work, that he always tended to do the final adjustments himself.

Dougie agreed: "Actually that's quite true. I think that may come from a number of things. First of all, on the whole we have patterned our industry on the American industry.

"I mean, America was the great inventor of movies. It was the real home of movies. Always has been.

"So our industry is like Hollywood with one exception. We don't have the type of gaffer that they have in the States. In the States, I gather, they have a gaffer who can give very great help to a cameraman because he understands what's going on and can, in fact, light a set himself.

"In England, our gaffers are inclined to be, shall we say, chief electricians. And they head a gang of electricians. But they wouldn't light a set. And I don't think anyone would ever want them to do that.

"All my life I've even done some photographic backings myself, menial things like that—an arc light coming from a window, even, which you could almost take for granted. Every little device, you know, I like to have a personal hand in it.

"I don't want to go carrying arcs and things about, but I do watch to make sure that the arcs go where they should and do exactly what I want them to do. It's just one of the reasons why you haven't been able to catch me on the floor."

David asked about Dougie Slocombe's distaste for the light meter. He remarked that this was unusual, even rare.

Dougie responded, "Through the years I did use one and in fact I've still got several. I'll tell you the thing I've found: I used to carry this meter around and point it at various things and it never quite said what I wanted it to say. So I always used to move the meter around until it read what I *wanted* it to read—that is, until it read the exposure I was going to give anyway. So it became quite ridiculous to carry the meter and now I don't.

"Every time a still photographer came on the set I could see him holding up a meter and I could see he always looked puzzled, too. Every time I see a still photographer shaking his meter I go up to him and say, 'We're shooting at F four, if it interests you, and if I were you, I'd put that damn thing away.' Which they do."

He added, "In movie photography you're not photographing something that exists. In the middle of the day or in the middle of the night you're photographing something that's supposed to be dawn or dusk. Or sometimes you're supposed to be doing day scenes and it's almost dark, the sun has almost set, but you're still trying to match stuff that was shot in the middle of the day. So you're doing almost night for day. Whatever you're doing, it seems to be the opposite of what the reality is."

For me, the beauty of Douglas Slocombe's conversation with David Wisniewitz was in its simplicity and also (bearing in mind the years of moviemaking, those hundred or so pictures) in the patience of the man spelling out basic principles. Why, such a man makes it seem as if anyone could be a cinematographer. And so it is with all luminaries. They do make it seem easy and they make it seem pleasant.

The sensitive men around Douglas Slocombe have been there for many years. Dougie noted that Chic Waterson had been with him for over thirty years as camera operator, Robin Vidgeon for well over twenty years.

"It's an incredibly long time," he declared. "It's a marvelous relationship. I couldn't live on the floor without them. I can't tell you how many pictures I've turned down because I couldn't have them.

"That is not to say directors didn't want them: they did. They are very popular. Directors love them. But sometimes in America, because of union conditions, I haven't been able to be guaranteed that I could have them.

"And for that reason, I've turned down a lot of American pictures. Simply because of that. And I have been offered a lot.

"We have a relationship where we hardly have to talk on the floor," Dougie said. "I know that Chic is going to get it right, just having one or two words with each other is enough. He will keep it right take after take, if it requires ten takes.

"He is incredible. And also, he watches for me, too."

I have spent many hours watching Chic watching for Dougie. He is a steel-wire-haired man with ferocious concentration, burning, deep-set eyes glaring out of a rugged square-jawed face built like a rock. Thirty years is a long time. Steven Spielberg and George Lucas, Frank Marshall and Howard Kazanjian hadn't that many years between them when Dougie and Chic first took up their positions at the epicenter of a motion picture. No wonder they watch for each other.

Dougie went on: "I will say to him, 'Did you notice there was a slight burn-up?' if somebody maybe walks too close to a lamp or something. And he has time to notice things like that and will always tell me."

One has to be quick to catch Chic talking. Words escape from his mouth like air from a split tennis ball, fast and thin. Dougie nods in a rather sweetly appreciative way, blinking through his glasses as he imagines the big screen, and frames his composition for Steven. They are a formidable team indeed.

Dougie continued, "And then there's Robin. He is marvelous. For instance on the zoom. Some people have a focus puller to operate the actual focus on the camera.

And then somebody else very often operates the zoom control.

"Now Robin always manages to do the two things simultaneously. He has the most extraordinary way of doing that. Very often in the shot, all the way through the take, you hear Chic whispering to Robin: 'Closer, closer, closer, pull out, widen, widen, stop.' And there's an automatic whispering understanding between the two of them so that the zoom size and the focus point are correct. It's a marvelous relationship.

"I couldn't live without them."

Technology Rules: The ILM Story

"I'm a fetishist when it comes to cameras."
—Richard Edlund, Visual Effects Supervisor

Sometime after the movie wrapped in Tunisia, I traveled to Northern California to visit Industrial Light and Magic (ILM), Lucasfilm's special-effects facility. There *Star Wars/Empire* veteran Richard Edlund and a team of up to seventy-five remarkable men and women brought about "God's Reply to Evil Men" and other effects for *Raiders of the Lost Ark*.

Leaving the vilest of smog behind in Los Angeles, I flew into San Francisco's rather less repellent variety. I was glad to be up there. I have always liked the Bay Area and its great bridge, and the funny little towns nestling against the water. At our first meeting Howard Kazanjian had told me that Lucasfilm was very keen for me to go see ILM "where they do incredible things." As it turned out, visiting ILM became a priority.

First located in Van Nuys, near Los Angeles (where the *Star Wars* work was done), ILM was relocated in the Lucasfilm base camp north of San Francisco in the late 1970s. They are now housed in a new building ideal for the needs of Richard Edlund and his team under the benign overview of George Lucas.

Richard Edlund, from Fargo, North Dakota, has a varied background in special effects and movie photogra-

phy. He learned basic camera techniques to a pretty good standard in the navy and at U.S.C., then began work on TV commercials. In between commercials, Edlund worked on the not very sophisticated but very much admired opticals for the TV series *Outer Limits*, *Twilight Zone*, and *Star Trek*.

Richard refined his skills by working in TV and, in 1975, joined *Star Wars* as first effects cameraman. A terrifically amusing and comfortable companion with a craggy face and full beard, Richard ran me through the complex arrangements at ILM with great patience. I will convey what he told me as clearly as possible, but there are times when I have to leave you to your own interpretations, since much of it is too complex for me.

With regard to *Raiders*, Richard remembered that George Lucas gave him a script early on. "He said, 'Read the end sequence.' At that time all it said was 'they open the box and all hell breaks loose' and the next shot was Indy embracing Marion. The sequence had not been at all laid out or defined as it was later. George, Steven, and I discussed it and I said, 'Do me a rough storyboard of the end sequence.' "

Richard went on: "Here at ILM we had to show 'the wrath of God' in a way that's organic and biblical. That means we have to manipulate what is accepted as being natural and real-looking to make it look different, but not weirdly different."

I asked if that meant they would have to use natural materials, elements, everyday matter.

Richard said that it did mean that. "You can't have a predominantly technological edge to it. I mean you can't just have laser scanning into the sky or anything like that: you would wind up with something that looked goofy."

He added that modern methods were being used almost with a subdued consciousness so there would be no 1980 trickiness that would suit neither the period of the film nor the ancient wrath of the eruption.

Tough.

Richard continued: "We had to conceive what, in biblical terms, would be the worst thing that could happen around the Ark and in the heavens; and we had to make it happen by synthetic means.

"We plan to drop colored fluids into a tank, seven feet

by seven feet by three and a half feet high, to produce the desired effect.

"It will work like this: we make an inversion layer by filling the tank halfway up with warm salt water; then we put a sheet of plastic on top and float clear water on the top of that. For a time it will float without mixing. Then, after about half an hour, the two kinds of water start to mix, but this happens very slowly and subtly so it gives us control.

"We already have some magnificent clouds and skies."

"By throwing the pigments into the tank and photographing it while it mixes?" I asked.

"That's right," said Richard,

I asked if the salt water was from the sea or whether they mixed it themselves. "We mix it here at ILM," he said. "Then it has to filter overnight in huge holding tanks. After the filtering, the impurities are removed. It's optically clear.

"We can filter enough water to do two shots a day, two fillings a day. I think we'll be doing this for a couple of months. There are two guys working on the setup and we've been at it for some time. As I say, we've already got skies that are looking fantastic but if we work with it some more it will look amazing.

"As long as you have time, you can refine. When time starts running out, then you say, 'Well, this is what you live with.' You can always do better. If you don't feel that you could do better, then you'd give up. If you could stand back at the end of doing something and say, 'Well, that's complete, I'm totally satisfied with everything about it,' then what would you do next time?"

Edlund and his team were using a massive aggregation of photographic techniques. "We have an arrangement for projecting 'lightning' on the 'clouds' produced within the tank and photographing the effect.

"I have this high-powered beam projector with a scanning laser," he said. "You can scan the laser, shine off one mirror onto another. By modulating the beam, you can get all kinds of interesting shapes."

Was all this for the final scene? "Yes. All for the skies only." I said it was astounding. He laughed. "We don't fool around here. We can't. It's a multimillion-dollar picture."

I asked him where he got the men and women who brought about such imaginative and skilled results. The mixture of hi-tech and fun had a very American ring to it, 1970/80 version, sort of an impish child-of-NASA feel.

"I don't rightly know where we find them," he confessed. "They come to us in different ways. We really have quite an amazing collection of scientists and artists, and good cameramen. All just great at what they can do.

"We sort of have to work as a family since we spend long months under pressure doing very detailed and tedious things. Everyone has to get along and be part of the fold. The amount of petty tension and that kind of thing has to be controlled. So you have to be certain. Some psychology is involved in keeping people happy."

We were now about halfway around the building at the primary VistaVision camera.

Richard said they shot in VistaVision wide-screen format because that enabled them to get a better quality. "VistaVision is a system that feeds through the camera horizontally, rather than vertically, so you end up with an image about twice the size of normal 35mm.

"Since everything we do is duplicated once, we shoot in a bigger negative and then reduce. We chose to shoot in VistaVision rather than in 65mm (which we could do, of course) because the camera for that 65mm is so much more cumbersome."

Richard said that the camera we were examining was for the intermediate steps of the original photography, which would be composited later on a big printer, "a monster printer." This, he explained, was a beam-splitter printer with four projector heads. Most optical printers have only two heads; having four heads makes it possible to put together a shot in one pass.

When printed and composited it came back in another form—in anamorphic format, "like Panavision or Cinema-Scope." And then, he said, it went down top to bottom, in the same format the movie theaters have. "It's expensive because all the equipment and your support items have to be in that format as well."

Passing through the building we came upon a display cabinet full of a great variety of cameras. "This is what you call a 'crash box,' for people who need to take production stills of something that's going on . . . plus there are

a couple of 16-mill cameras of various vintage, a Nikon, a Cine Kodak which never gets used, a Polaroid camera. We use them all the time for reference.

"A crash box was an idea I had from my time in the navy. We had one so that whenever there was an airplane crash, we had a bunch of cameras all ready and loaded; if you got a call then you had to jump on the truck and run over to the runway and have your camera ready to shoot. The same thing can apply here for fast action when the need arises. As it does."

Next we stopped off at a room where ILM keeps track of the elements in use on a project by means of a strip system. "The strips can be jockeyed back and forth on a wall. There were 10,000 elements—individual pieces of film—involved in doing *Empire*. On *Raiders* I don't know yet. Just the sheer difficulty in handling that much information, being able to find one particular element, makes this room essential."

The wall was overwhelmingly complicated, but if you understood it, it worked. If you didn't, then like most everything at ILM, it was intimidating.

Then we explored the room where the negative is cut. Richard explained: "This is what we call a 'clean room.' It has filtered air, so all of our negatives are handled only in this room. We have the elements in here—the various pieces of work used in various films—stocked in retrievable positions. A lot of it is stock left over from *Empire*, stock material."

We moved on to a handsome and exceptional Moviola. Richard explained, "Here is a camera movement on which you can run several thicknesses at once; it's very bright. If you stand on the axis you can get a nice large-size image. It has a lineup clip or chart which corresponds to a grid that is exactly the same in the camera eyepiece.

"So when anything is lined up by fields, anywhere in any of the cameras in the building, you could look at it here. Oftentimes one shot will be comprised of several different individual parts shot on different individual cameras. In order to keep it so it all fits, we have this grid system."

"For example, in *Raiders*, let's say you have the altar set. You can block in by numbers where you want clouds to be.

"In the case of the final sequence of *Raiders* you have a

set to shoot clouds and by using this grid system, you know that the camera has to be at a certain angle, tilted a certain number of degrees so that the horizon is in the correct place and the perspective is properly oriented. Then you can compose the clouds within the frame."

Richard said the camera was one of a kind. He built it for *Star Wars* and it had been in constant use since and had not yet been anodized. (That means blackened.) I asked if it had been patented and he said that as with the problem with the anodizing, there had been no time to patent. "Besides, how are you going to stop one guy from making something like that?" he asked, reasonably enough.

No matter how far technology has traveled, there is much at ILM that has to spring from original thoughts without passing through any machines. I asked Richard if he was an inventor.

"Yes," he said. "You sort of have to be all the time around here. Because the major special-effects work is trying to trick people. And people are very sensitive and aware of what film should look like because they've seen so many films. If they see something wrong in a shot, they don't have to know *what* is wrong with it. They just see it fails to work.

"So that is what you have to beat—that awareness."

We came next upon the main camera.

"This is our main camera. It has been since *Star Wars*, and we are building a new version of this which will be ready for *Revenge of the Jedi* and possibly for some shooting of *Raiders*.

"The thing with it is that you can tilt with it, tilt straight down with it, or you can tilt up 30 degrees. You've got 120 degrees of tilt, you can pan all the way around. The camera can roll all the way around as many times as you want. You can boom up and down, you can traverse sideways, this way, that way.

"The real secret of this camera is that it will remember everything I do to it." He moved it to demonstrate its mobility. "We have an electronics package on it that will remember whatever you do on the camera and repeat it as many times as you want. It will scale the time into any ratio that you want to.

"In other words, if you want to have a shot that's pro-

grammed to shoot in seventy-two frames (which is three seconds) and instead you want to shoot it in forty-eight frames, the computer will ratio the program and shoot the same shot in forty-eight frames *and* seventy-two frames, if you like, or various increments. It is our most versatile tool."

I asked if it enjoyed the privilege of being the only one in the world. "No," said Richard. "There are a few other versions of it here, but this is the original." I stared at the remarkable brain of the thing and counted twelve motors.

There was another camera, larger, longer.

Richard said, "You can do double exposures that match each other exactly. That's the real benefit of this camera. You can run anywhere from high speed down to long-time exposures. And it is also interfaceable to a computer so that it can computerize exactly what the camera is doing at any one point.

"It's like a robot. A very complicated robot. You open it up inside and there's a mile of wires and chips and all that stuff inside. The main advantage of it is that it's got this little unit that plugs into the computer."

I asked him how he felt about all his cameras.

"It's sculpture as far as I'm concerned. I'm a fetishist when it comes to cameras. I have a collection of between twenty and thirty this year."

Just then we passed by another camera. "This is a camera we built here, another one of a kind," said Richard. "This is a high-speed VistaVision camera. It's a mirror-reflex camera built for special-effects work. It has a rotating mirror so you get perfect picture quality and you can see through the eyepiece what you are photographing. This camera runs ninety-six frames a second, which is four times normal speed. Slow motion is one of the tools that you need to achieve illusion. When a miniature falls over at normal speed it looks small, but if you shoot it at slow motion then it gains in scale. And the faster your camera can run, the smaller you can keep the miniatures. This is part of our secret: keeping the miniatures as small and constructible as possible."

Richard said he couldn't let me go without showing me a special room. Inside this very cold room were all the models of the spaceships from *Empire*. "Two million dollars' worth of models in here," said Richard. I wished my

children were with me. *Millennium Falcon* originals! R2–D2.

And then we came to the final stage of all that ILM represents: the big printer.

"These are actually the sharpest lenses we have in the whole place," Richard explained. "So this is where every bit of our work comes. Everything that we shoot at ILM has to traverse through this machine, where it is anamorphized, squeezed. Then it can be cut in with the rest of the picture. This is accurate to one ten-thousandth of an inch. Let's say we have fifteen pieces of film to put into a shot; there has to be one final matte that encompasses that, that has all those fifteen pieces of film."

I asked if this meant fifteen *layers* of film. He said it did.

Yes. *Fifteen* layers. Accurate to a ten-thousandth of an inch.

I asked Richard Edlund how much this apparatus cost. He said it cost about $600,000, but he added, "We're spending a little bit of money now refining a few parts of it.

"I mean this is the heart of the operation. Without this we couldn't do anything. So it's a very very crucial piece of equipment."

"Which you did not have for *Star Wars*," I said.

"No, no," Richard declared. "And you can tell by the quality of the effects."

This machine, like so much else either extant or planned at ILM, is computer-controlled. All of the motors involved will be confined soon to one panel.

Don't forget. Accurate to one ten-thousandth of an inch. No wonder you can't see the joins in *Empire* in your neighborhood theater. And as for *Raiders*, when the refinements are done . . .

Richard Edlund smiled.

"Technology rules," he said.

"In decent hands it's a wonderful thing," said I.

"True," he said.

What I had dreaded had not happened. I had not been blinded by science. I had been greatly moved by technology in the hands of a great many sensitive people who want to make good pictures better. Side by side with scientists were brilliant painters, working on star fields, on nature, on the universe in miniature.

How to Knock Out a Film Score in Three Months: A Tribute to John Williams

"Doing eighty minutes of music in eight to ten weeks leaves little time for pleasure."

—John Williams

During some of the more emotional and, indeed, mystic moments in the filming of *Raiders*, Steven Spielberg placed a small cassette player near the actors. The scene would be transformed by the mood of the music, most of which I hadn't heard before. Sometimes the music was haunting, brave, or stirring, sometimes sad or heroic.

Whatever it was, it never failed to do something to the actors. Eyes would gleam more brightly and with more determination, nostrils would flare and jaws set in defiance of evil spirits. At the lifting of the Ark, for example, the music Steven provided was most effective, drawing new resources of emotional energy from the players, Harrison Ford and John Rhys-Davies.

It is one thing to look full of wonder if you are carrying the Ark of the Covenant from its ancient resting place under the noses of the Nazis, and quite another thing to look full of wonder if you are carrying a brilliantly designed piece of plywood nonsense from a Styrofoam base in a studio in a suburb of London.

Hence the mood music. I asked Steven Spielberg about it.

"It was a trick, merely a trick and maybe not even that, but just an experiment to pull something else out of, say, Harrison. I thought it would be a little easier to play some mood music on the set. Of course, it's the least original thing I could have done. In the early days they would bring a small orchestra on the set, if it was a large-budget film, and if it was a low-budget film they would bring a tacky piano and a violin.

"What I play at times like that are themes. Johnny Williams will never hear that piece of music on the film. But it does work on the set.

"You use the music to key a feeling that the actors would otherwise have to rely on their imaginations for. Harrison does this well because he has a wonderful ability to imagine how he should feel. But music just makes it easier. You let the music direct you.

"You let the beats and measures of the score tell you how to feel. It just so happened we found a couple of wonderful numbers for the interior map-room sequence that were as if written for *Raiders*, as if written for Harrison."

What was Steven's own music background?

"I was raised with chamber music, sonatas, original compositions, and recitals. It was a part of my life that I actually snubbed for a long time because it was too grown up.

"It was too adult for me. Five or six years old, and four women came over to the house to play: two pianos, a cellist, and a flautist; and I would leave the house and run down the street and play with my 'normal' friends.

"But music has always been an influence. When Johnny Williams and I met, we were a perfect couple because I really appreciate the music he writes.

"And although I have absolutely no talent in that direction whatsoever, I know enough about what I want that the two of us have very simple yet thorough conversations about the kind of music that's right for the movies I've been making for the past five years.

"Again, although I have no talent for music, I do have about three hundred hours of soundtrack music on cassette and I play it all the time. I don't associate the music with the movie. But sound tracks have become one of the very

few outlets for a symphonic classical contemporary composition. It's an excuse for Johnny Williams to write classically where he would probably have written for opera or Elizabethan court drama or just for the king, several hundred or more years ago."

John Williams, twice Academy Award winner (for *Star Wars* and *Jaws*), was the natural choice for this latest Spielberg film.

Steven said, "If John and I sit down and listen to classical music and we think Beethoven sounds pretty good for what we need, or say Tchaikovsky's *1812 Overture*, Johnny might be influenced by that the same way I am possibly influenced by Raoul Walsh or John Ford or Michael Curtiz in the way he directed *Don Juan*.

"We are all influenced by something. But what I won't do is influence Johnny with another of his contemporaries on the soundtrack scene."

"I'll tell you how the *Jaws* theme came about. I had actually cut in one of John's own pieces of music for the opening titles. That was John's title theme from Robert Altman's film *Images*.

"So I cut in a section that was a lovely piano solo with some very ominous strings in the background that would probably have been wonderful for a movie about a haunting. And I thought it was playing against the obvious primal feelings that run very deep through *Jaws*. When Johnny heard it, though, he just didn't go for it at all.

"And he came up with the da-da-da-da-da-da-da-da theme that at first amazed me. I thought he was pulling my leg when he first played it on the piano. But after I heard it three or four times on the piano, we both laughed and Johnny said: 'Do you think we will get away with it?' I said: 'We better, because that's it, you've got it. You've hit it on the head.' "

Steven said that a lot of his films were cut musically. "The way, I guess, music editors cut the music into the film, I like to cut the film itself. I make quite certain that there was music in the background and scenes cut to music. Also scenes that I just edited with music in my head.

"When I am talking music to Johnny I talk in rhythms, yada yada yada, bumpa bumpa bump—that kind of talk. Like a horse gallop, say.

"We would talk in just feet and measures. Sometimes I

shot and edited the scene around imaginary music. Then I felt compelled to hand that over to Johnny and Johnny just took it the rest of the way."

Months after production ended, I found myself in Abbey Road Studios in London, falling in with Robert Watts and Howard Kazanjian, Steven Spielberg and Kathleen Carey, George and Marcia Lucas, Lionel Newman, Norman Reynolds, Pat Carr, the entire London Symphony Orchestra and later Paul Freeman.

Up on the screen in number-three studio in massive black-and-white was the happy couple, Indiana Jones and Marion Ravenwood, wholly believable, sharing a silent joke, while John Williams took the LSO through the last moments of rehearsal for the music for the last scene of the film.

The mood in the control room was entirely delightful. Lionel Newman, silver-haired and compact, the smiling veteran of so many films, was counting bars, and Steven Spielberg, looking very young, unbespectacled, was counting his lucky stars. It seemed obvious that the film was a success.

That evening I took time to talk to John Williams. I wanted to interview the composer who was adding such a wonderful layer to a rich and valuable cake.

I asked him if he had found the work pleasurable. He said it was only now, when he had done so much film music—including both the *Star Wars* sagas, *Superman I*, *The Towering Inferno*, *Earthquake*—that it was clear to him that it was a really tough job. He said one had to work day after day relentlessly, otherwise the score just wouldn't get done.

"Doing eighty minutes of music in eight, ten weeks, as I have, leaves little time for pleasure; it has almost to be done journalistically, until it is finished. Recording it with an orchestra is a pleasure; and there is still a kick, after all these years, when you see and hear it on the screen."

I had imagined that with *Raiders* he would allocate themes to people, and symbols, with some distinct separation. He said he had done as follows. "The Ark: this is religious, orchestra and chorus but using the two as one sound; you won't hear the chorus.

"Indiana Jones's theme: this is heroics. Marion's theme is a recurrent love theme. The baddies theme, the Nazis,

etc., is dark music. Those are the four main themes, which recur. There is a fifth, almost a set piece within the main music and not related thematically, for the scene with the monkey and Marion and Indy in the Cairo street. This was Steven's idea. He was trying to have a kind of 'As Time Goes By' feel, a '30s attitude.

"It's difficult to come up with this sort of thing these days, to get the right feel, but I hope people will think we've succeeded.

"To discern a '30s mood and express it isn't like doing a pastiche. A pastiche is not that difficult. What is not easy is taking it a stage further and doing the real thing, with some sincerity."

Raiders of the Lost Ark is planned, as I write, to come out at 110 minutes with an additional four and a half for credits. Eighty minutes of music underscores the film. The CBS album will not, however, be a double album. "I will edit the work for the record," John Williams explained. "For instance, the chase scene is eleven minutes long and we won't need all of that. And we won't be repetitive. So I can make it into a solid single album."

If there is one colleague in films with whom Steven Spielberg associates most closely, one other person who knows what Steven is looking for in a film, it is John Williams, said someone who has worked with both men. There must be something to this, because the collaboration in *Close Encounters* and *Jaws* was very strong and the music a great adornment.

I told Mr. Williams that Steven was a sincere fan. "While we are talking about that, let me say something about him," he said. "In a jaded town like Hollywood it was a pleasure to meet such an honest open guy, a wonderful surprise to meet someone so unhardened: a clear lungful of fresh air.

"He was so young when I met him to discuss *Jaws*. In his twenties. His idea of dinner out was a hamburger. He had never seen a wine list. He did everything except hold it upside down. Without being ingenuous, he was a real treat.

"Having said that about him as a person, I should say he is also very talented musically. He plays clarinet, and it is not so much that he plays it very well but he plays it with such feeling. He is fascinated by music and has an

instinctive understanding. He also has great recall and can sing me themes from films I made ten years ago. If I have an insecurity with something I'm trying to do, he can understand. If he has an anxiety, then I can help him out. He is very nearly unique in my experience."

Epilogue

What a long haul! I began knowing nothing and end forgetting everything. I learned a lot in the intervening months. I had many good intentions along the way. I notice from my circular plan, drawn on a piece of paper from the first draft, that I met many obligations and covered quite a lot, but I am nagged, too, by what I failed to mention.

Like the cost of the Flying Wing—about sixty thousand dollars. I didn't mention that. And the wrap parties in Tunisia and Hawaii organized by Dr. Frank Fantasy. Did I forget those? The "doctor" was Frank Marshall.

Nevertheless, this here and now is the end and in it are some of the missing bits. I didn't do justice to Michael Kahn, the editor, who told me editing was not, for him, a problem. I wish I had talked to him more; Ron Lacey said he was a great walking, talking colleague in Sousse after I had left. "A good soul," said Ron. I, too, found him so. On the flight from London to L.A. he asked me to visit the editing facility in Marina del Rey, but I didn't. Too shy.

I meant to tell you that a little Arab boy ran in front of Terry Leonard's truck during some heavy stunt driving. Terry stopped dead, and the boy lived. But for a moment, who knew?—an eleven-year-old prone under the wheels while Moslems wailed a mourning chant. He pulled through with no broken bones and all vitals intact. The crew brought him a bicycle from England, some toys, and cash for his father to put in trust.

And I meant to tell you that Robert Watts said that Habib from the Tunisian production team spent the best part of a day organizing the removal of 350 television aerials from houses in Kairouan. "Kissed him on both cheeks," said Watts, a fan forever.

Looking over early notes, I read that Steven didn't like working on a high-crane camera. "Every time I am up there I feel scared," he said. "Never get used to it. I would rather be down among the snakes."

Many times I have tried to divine what Steven's special gift is. I concluded that his is an everyday sort of genius: ten percent inspiration and ninety percent perspiration. What an individual—half man, half camera. He really does know movies and how to make them. What a gift! Whether it was Harrison Ford or Ron Lacey or Karen Allen or David Tomblin, we all agreed. Steven is a hell of a topic. I have had many heroes. He is another. Is it a sign of age when one's heroes get younger?



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A STEVEN SPIELBERG FILM

Cast

Indy Harrison Ford
Marion Karen Allen
Belloq Paul Freeman
Toht Ronald Lacey
Sallah John Rhys-Davies
Brody Denholm Elliott
Satipo Alfred Molina
Dietrich Wolf Kahler
Gobler Anthony Higgins
Barranca Vic Tablian
Col. Musgrove Don Fellows
Major Eaton William Hootkins
Bureaucrat Bill Reimbold
Jock Fred Sorenson
Australian Climber Patrick Durkin
2nd Nazi Matthew Scurfield
Ratty Nepalese Malcom Weaver
Mean Mongolian Sonny Caldinez

Mohan	Anthony Chinn
Giant Sherpa	Pat Roach
Otto	Christopher Frederick
Imam	Tutte Lemkow
Omar	Ishaq Bux
Abu	Kiran Shah
Fayah	Souad Messaoudi
Monkey Man	Vic Tablian
Arab Swordsman	Terry Richards
1st Mechanic	Pat Roach
German Agent	Steve Hanson
Pilot	Frank Marshall
Young Soldier	Martin Kreidt
Katanga	George Harris
Messenger Pirate	Eddie Tagoe
Sergeant	John Rees
Tall Captain	Tony Vogel
Peruvian Porter	Ted Grossman
Mr. Ford's Stand-In	Jack Dearlove
Stunts	Terry Leonard
	Martin Grace
	Vic Armstrong
	Wendy Leach
	Sergio Mione
	Rocky Taylor
	Chuck Waters
	Bill Weston
	Paul Weston
	Reg Harding
	Billy Horrigan
	Peter Brace
	Gerry Crampton
	Romo Garrara

Production Staff

Directed by
STEVEN SPIELBERG
Produced by
FRANK MARSHALL
Screenplay by
LAWRENCE KASDAN
Story by
GEORGE LUCAS and
PHILIP KAUFMAN
Executive Producers
GEORGE LUCAS, HOWARD KAZANJIAN
Music
JOHN WILLIAMS
Editor
MICHAEL KAHN, A.C.E.
Associate Producer
ROBERT WATTS
Director of Photography
DOUGLAS SLOCOMBE
Production Design
NORMAN REYNOLDS

Casting	MIKE FENTON & JANE FEINBERG MARY SELWAY
Second Unit Director	MICHAEL MOORE
Stunt Co-Ordinator	GLENN RANDALL
Costume Design	DEBORAH NADOOLMAN

Visual Effects Supervisor	RICHARD EDLUND
Mechanical Effects Supervisor	KIT WEST
First Assistant Director	DAVID TOMBLIN
Production Supervisor	DOUGLAS TWIDDY
Assistant Production Manager	PATRICIA CARR
Second Assistant Directors	ROY BUTTON
	PATRICK CADELL
Location Manager	BRYAN COATES
Continuity	PAMELA MANN
Associate to Mr. Spielberg	KATHLEEN KENNEDY
Additional Photography	PAUL BEESON, B.S.C.
Operating Cameraman	CHIC WATERSON
Assistant Cameraman	ROBIN VIDGEON
Second Assistant Cameraman	DANNY SHELMERDINE
Dolly Grip	COLIN MANNING
Gaffer	MARTIN EVANS
Head Rigger	RED LAWRENCE
Art Director	LESLIE DILLEY
Set Decorator	MICHAEL FORD
Construction Manager	BILL WELCH
Property Master	FRANK BRUTON
Assistant Construction Manager	GEORGE GUNNING
Assistant Art Directors	FRED HOLE
	MICHAEL LAMONT
	JOHN FENNER
	KEN COURT
Production Illustrator	ED VERREAUX
Production Artists	MICHAEL LLOYD
	RON COBB
Sketch Artists	ROY CARNON
	DAVID NEGRON
Decor & Lettering Artist	BOB WALKER
Draftsman	GEORGE DJURKOVIC
Scenic Artist	ANDREW GARNET-LAWSON
Modeller	KEITH SHORT
Chief Buyer	DAVID LUSBY
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Supervising Plasterer	KENNETH CLARK
Master Painter	ERIC SHIRTCLIFFE
Construction Storeman	DAVE MIDDLETON
Property Master (Tunisia)	PETER HANCOCK
Property Supervisor	CHARLES TORBETT
Armorer	SIMON ATHERTON
Wardrobe Supervisor	RITA WAKELY
Wardrobe Assistants	SUE WAIN
	IAN HICKINBOTHAM
Chief Make-Up Artist	TOM SMITH
Make-Up Artist	DICKIE MILLS
Chief Hairdresser	PATRICIA McDERMOTT
Hairdresser	MIKE LOCKEY
Stunt Arranger	PETER DIAMOND
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Effects Technicians	TERRY SCHUBERT
	RODNEY FULLER
	TREVOR NEIGHBOUR
Effects Engineering	TERRY GLASS
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Equipment Supervisor	BILL WARRINGTON
Special Effects Electrician	CHRIS CONDON
Special Effects Carpenter	ROY COOMBES
Special Effects Welder	YVES DE BONO
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	RAY HANSON
Animal Handlers	MICHAEL CULLING
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	JED EDGE
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Sound Effects Editors	STEVE H. FLICK
	MARK MANGINI
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Dialogue Editor	ANDY PATTERSON
Assistant Dialogue Editor	ERIC WHITFIELD
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Sound Boom Operator	JOHN SALTER
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	STEVE MASLOW
	GREGG LANDAKER

Music Recording	ERIC TOMLINSON
Orchestrations	HERBERT W. SPENCER
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	BRUCE GREEN
	COLIN WILSON
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Apprentice Sound Editor	PETER GRIVES
Foley Editor	JOHN DUNN
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	BARBARA HARLEY
Assistant to Mr. Spielberg	MARTY CASELLA
Assistant to Mr. Kazanjian	LAURA KENMORE
Assistant to Mr. Lucas	JANE BAY
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	DANIEL PARKER
Doctor	DR. FELICITY HODDER
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Unit Publicist	DEREK ROBBINS

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	GERRY DUNKLEY
	DAVID WORLEY
Assistant Cameraman	CHRIS TANNER
Second Assistant Cameraman	EAMONN O'KEEFE
Dolly Grip	JIM KANE
First Assistant Director	CARLOS GILL
Second Assistant Director	MICHAEL HOOK
Continuity	MAGGIE JONES
Doctor	DR. HASSAM MOOSSUN

The Making of Raiders of the Lost Ark

Special Visual Effects Produced at INDUSTRIAL LIGHT AND MAGIC Marin County, CA.

Optical

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Production Supervisor	THOMAS SMITH
Art Director-Visual Effects	JOE JOHNSTON
Matte Painting Supervisor	ALAN MALEY

Visual Effects

Editorial Supervisor	CONRAD BUFF
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Production Associate	MIKI HERMAN
Animation Supervisors	SAMUEL COMSTOCK
	DEITRICH FRIESEN
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Camera Operators	BILL NEIL
	DON DOW
Assistant Cameraman	CLINT PALMER
Optical Printer Operators	DAVID BERRY
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	LORING DOYLE
	SCOTT CAPLE
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Computer Engineering	KRIS BROWN
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Electronics Engineers	MIKE MACKENZIE
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Machinist	UDO PAMPEL
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	BOBBY FINLEY III
	EDWARD HIRSH
	PATRICK FITZSIMMONS

	JOHN McCLEOD
	PETER STOLZ
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	MODERN FILM EFFECTS
Titles	MGM TITLES

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First Assistant Director	NACEUR KTARI
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	ABDELKRIM BACCAR
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The Making of Raiders of the Lost Ark

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Original Soundtrack Album on CBS Records

About the Author

Born in Liverpool, England, author Derek Taylor started his career as a newspaperman writing for several papers in the Liverpool/London area. As a drama critic and columnist for *The Daily Express*, Taylor covered England's then newest rock sensation, the Beatles. He developed a close relationship with the four young men and their manager Brian Epstein and in 1963 became the group's publicist and Epstein's personal assistant. Two years later he moved to Los Angeles, California, where he became the publicist for such popular groups as the Byrds, the Mamas and Papas, the Beach Boys, and Captain Beefheart. In 1967, Taylor helped organize the now legendary Monterey Pop Festival and today is recognized as one of its founders. He returned to England the following year as press director of Apple Corps, Ltd., the company formed by the Beatles. After three years there, he moved to Warner Bros. Records and after several years with them, Taylor retired from the business and moved to the English countryside. He edited George Harrison's book, *I, Me, Mine* and wrote his own book, entitled *As Time Goes By*. Taylor currently serves as a consultant and director of Hand Made Films, the film company formed by George Harrison with England's most popular comedy group, Monty Python. He lives in Suffolk with his wife, Joan, three sons, and three daughters.

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